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ABSTRACT

Six of the seven papers in this collection focus on regional library activities in Africa, Asia and Oceania, and Latin America and the Caribbean: (1) "Libraries and Information Services in a Changing World: The Challenges African Information Services Face at the End of the 1980s" (Dejen Abate, Ethiopia); (2) "The Computer and Knowledge Information Development in Malaysia: Some Perspectives" (Edward Lim Huck Tee); (3) "New Development of Scientific and Technical Information Services in China" (Wang Jiabin, China); (4) "El Papel de las Asociaciones Profesionales (The Role of Professional Associations)" (Maria Casas de Faunce, Puerto Rico, in Spanish only); (5) "Library and Information Services in a Changing World: An African Point of View" (A. Olugboyega Banjo, Nigeria); and (6) "Report of the Activities of the Regional Section for Asia and Oceania 1986-1987" (J. S. Soosai, Malaysia). The seventh paper was delivered at a joint meeting of the Division of Regional Activities and the Division of Libraries Serving the General Public: "Library Development Worldwide: The Role of the British Council" (Gillian Roche, United Kingdom). (CGD)

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Division of Regional Activities

SECTIONS ON REGIONAL ACTIVITIES

ED300007

AFRICA

Sessions: 171 Wednesday 15.00 – 16.30
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Libraries and information services in a changing world: the challenges African information services face at the end of the 1980s *(119-AFRICA-1-E)*

Dejen Abate
Pan African Documentation and Information System
Addis Ababa Ethiopia

ASIA AND OCEANIA

Sessions: 173 Wednesday 15.00 – 16.30
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The computer and knowledge information development in Malaysia: some perspectives *(11-ASIA-1-E)*

Edward Lim Huck Tee
Universiti Sains Malaysia

New development of scientific and technical information services in China *(23-ASIA-2-E)*

Wang Jiabin
Institute of Scientific and Technical Information
Shanghai China

LATIN AMERICA AND THE CARIBBEAN

Sessions: 172 Wednesday 15.00 – 16.30
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El papel de las asociaciones profesionales *(43-LA.AM-1-S)*

Maria Casas de Faunce
Universidad de Puerto Rico
Rio Piedras Puerto Rico

DIVISION OF REGIONAL ACTIVITIES DIVISION OF LIBRARIES SERVING THE GENERAL PUBLIC

Joint Meeting
Session: 111 Tuesday 15.00 – 16.30

Library development worldwide: the role of the British Council *(62-GENPU-1/REG-1-E)*

Gillian M Roche
Libraries Department
British Council
London UK

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LIBRARIES AND INFORMATION SERVICES IN A CHANGING WORLD: THE CHALLENGES AFRICAN INFORMATION SERVICES FACE AT THE END OF THE 1980s

DEJEN ABATE, *PAN AFRICAN DOCUMENTATION AND INFORMATION SYSTEM (PADIS), ADDIS ABABA, ETHIOPIA*

ABSTRACT

In the industrialized world the challenges information services face are associated with technological advance. In Africa, that challenge is the challenge of development.

The solutions proposed to overcome the series declines in African standards of living include revolutionizing agriculture, economic and administrative reforms, increased intra-African trade and industrialization in support of agriculture.

The implications for African information services are: information services targeted at rural development, trade, industrialization and the private sector; increased emphasis to factual and numeric services; vigourous marketing of services; training of polyfunctional information managers; upgrading of existing skills and manpower; reforms in library education; and, creating the right manpower and organizational conditions for the selective introduction of modern information technologies.

INTRODUCTION

1. The world is changing, but the world is a community of nations, and for some of those nations it is changing for the better, for others, for the worse. The forces and elements of change in the different parts of the world are drastically different. In some parts of the world the major force of change is technological advance; in others, it is the determination of the policy to achieve equity and to overcome hunger, deprivation and disease.

2. In the North, and in a sizeable number of newly industrialized countries of the South, the force of change that poses most implications for information services[1] is the technological advance associated with the microelectronic revolution (expert systems, mass storage devices, on-line systems, downloading, interconnections) which is leading to substantial changes in the nature and type of services, the ease of use of services, systems design, efficiency and cost as well as to the role of the information professional.[2]

3. These are hardly the most challenging changes African information services are encountering or will be encountering as the end of the 1980s approaches.

4. The present paper attempts to give a brief prognosis of the magnitude and complexity of development problems in sub-Saharan Africa, along with some of the macro-level solutions prescribed to arrest the worsening crisis. It attempts to draw from these problems and solutions emerging needs for information and their impact on the nature of services and products information services are expected to generate in the African region. The paper concludes that the challenges information services face are none other than the challenges of African development.

II. THE CHALLENGES TO DEVELOPMENT IN SUB-SAHARAN AFRICA 3/

5. Notwithstanding the heterogeneity of situations in African countries the present economic and social crisis affects them all, though to varying degrees of intensity. All African countries, without exception, experienced a fall in production of goods and services accompanied by disturbing reductions in levels of investment, inflationary pressures, appalling levels of unemployment and falls in real wages. This situation was worsened by the intensity and duration of the 1983-85 drought which led to the heaviest losses in human lives and animal populations in modern human memory.

6. The causes attributed to the peropetual decline of African economies are numerous and intricately woven. To cite a few of them: the prevalence of an economic system that relied on a small privileged modern enclave that produced a narrow range of primary agricultural or mineral products at the expense of a large neglected subsistence sector; inability of governments to discharge their functions in accordance with plan prescriptions and declared policies; adoption of models and strategies for development which emphasized financial capital in general and, foreign capital in particular, at the expense of the development of human capital in technological and entrepreneurial skills; and most importantly, that in their pursuit for modernization governments neglected the fact that the agricultural revolution was at the root of the industrial revolution.

7. In addition to the above, world trade is contracting. The immediate impact of this has been on primary commodity producers. Those that managed to complete their agricultural revolution and to diversify and advance their techno-industrial base are surviving the crunch; others, including the vast majority of African countries, have suffered badly. The fall in world trade has given rise to protectionism; balance of payments deficits; disequilibria in global financial flows; and, the "debt complex" that has added a totally new dimension to African problems and aspirations.

III. MACRO-LEVEL PRESCRIPTIONS FOR ECONOMIC RECOVERY AND DEVELOPMENT

8. There is a consensus that agriculture must be given unprecedented attention. In the words of Samir Amin:

"The task of bringing the agricultural revolution is therefore the priority target for the decades to come. This is a very complex task, obviously multi-dimensional. It has technological dimensions: what types of equipment and other inputs (control of water, use of chemicals etc.) may bring simultaneously significant increases in production. These technological choices imply the design of adequate supportive economic policies: the choice of price and income systems, the choice of supportive industrialization priorities, the pattern of financing, etc. These policies in turn bear complex social and political consequences: how the various types of social control in rural areas (land property and use, rent and wage system, co-operatives, etc.) command the direction of change... how the types of social control in place are the result of the relation of the State to the rural communities; ... [and] how the various types of social control on trade systems and industry combine with the need for agricultural change..."[4]

9. He continues to state that:

"the alternative option rests first on the principle of distribution of income... between rural and urban areas and between the modern sectors and the backward ones... This implies, therefore, national and popular forms of social organization: the control of peasants over agricultural projects, co-operatives, institutions of collective bargaining of agricultural prices, national control of industries, a national wage policy, etc."[5]

10. There seems to be a similar level of concensus that economic cooperation and economic integration amongst African countries are necessary elements:

"Economic integration has rightly not lost its attractions as a component in programmese for African recovery, despite the extremely limited success or total failures of the schemes that have been tried... this continued hope in integration as a developmental mechanism is the difficulty countries of Africa see in the way of an alternative. So many countries are economically so small that domestic production for such small markets will be at extremely high cost if economies of scale are of any importance"[6]

IV. EMERGING INFORMATION NEEDS AND THEIR IMPLICATIONS ON EXISTING INFORMATION SERVICES

11. The imminent shift in development strategies in favour of agriculture, and industrialization linked to agriculture, lays the basis for the priorities in subject emphasis for all categories of information services (libraries, documentation centres, statistical offices, etc.). A large number of African countries already possess agricultural libraries and documentation centres, agricultural statistics units, etc. while others are in the process of setting them up. Lately, there is some practice and a lot of talk about early warning systems, food security information systems, environmental monitoring systems, etc. The issue, however, is how far these services could effectively meet multidimensional rural development concerns (farm management, adult education, water management, appropriate technology, etc.) and the heterogeneous user environment the rural development process involves (planners, extension agents, peasant leaders, district administrative officers, etc.). There have been some experiments in rural library systems (mail box, village libraries, mobile libraries, etc.) but these have been, at best, extensions of the urban public library system often emphasising provision of post-litereacy reading materials. The first challenge therefore is, how do the existing documentation, statistical and library services cope with the information support needed for agrarian reform and rural development? Over the last few years there has emerged mention of:

"information systems in support of rural development which are not yet as firmly established as other types of information... [and the concern for] creating user participative than directive information systems"[7]

12. In addition to the challenges in concepts and design principles the rural development information (RDI) problematic poses, the practice of RDI services in terms of methods of delivery, organization

of information collection and processing, identification of user characteristics, etc. will require a tremendous amount of innovation and expertimentation.

13. Similarly, the macro-level solution proposed for African development in the framework of economic integration, increased intra-African trade and transportation, multinational industrialization, etc. lays the basis for another area of subject emphasis i.e. information support for trade, industry, transport, natural resources, the private sector. Apparently, African information services in their design and implementation are primarily subject, discipline or function oriented and not mission-oriented. Trade information services are largely absent, ill-understood or at a very embryonic stage. The information needs of the public sector are the least understood aspect of the information problematic in Africa. These are another set of challenges the information community will need to address itself to.

14. Economic planning, development policy and dicision-making, econom economic management, public administration and monitoring of policy and plan implementation form the weakest link in the chain of government functions. Some of the shortcomings are a result of inappropriate and/or inadequate use of information or its absence in a usable form. Adjacent to these, there has emerged the need to follow-up and monitor the structural adjustment/readjustment process virtually every sub-Saharan African country has subjected itself to, particularly on the impact of those adjustments on social and economic life. The impediments in this area are three-fold: first the absence of suitable indicators to explain and monitor the phenomena; second, the mechanism for the generation of the information and data to gauge changes in those indicators; and, third, the need for information systems that will regularly collected, process and deliver information once the indicators have been defined and the data generation routines established.[8] The first two are commonly seen to be beyond the competence of the information specialist. The question is: is the conventional information practitioner ready to face the challenges posed by the third?

15. The value of bibliographic information systems is well accepted by the African information and user community. Data bases concerned with factual and numeric information have not enjoyed a similar level of acceptance. The topic as a whole is relatively new to sub- Saharan Africa and any consideration of the issue has to be thorough and should answer questions such as: what types of user needs can better be served with factual data bases? What are the expertise and resources required to support such services? How could the link between bibliographic, statistical and factual data bases be established and exploited optimally? And who will handle factual data bases – specialized libraries, statistical units or an altogether new entity?[9] Irrespective of the answers to these, one should ask whether African information services are up to the challenge.

16. Beyond the challenges posed by shifting developmental priorities, most libraries and documentation centres still operate on the notion that "... when information is available it will be utilized" without sufficient consideration to the intrinsic (sources, delivery modes and channels, time factor, language factor, retrieval efficiency, coverage.) and extrinsic limitations (socio- political framework, economic infrastructure, motivations to seek information, etc).[10] It is not only that extrinsic limitations are of equal, if not of greater, importance but also that:

"...too much emphasis has been placed on the supply of services and too little on mobilizing demand. New information services have tended to be based on traditional library services and only rarely have potential users been involved in the design and operation of services... User studies are conducted only occasionally... little effort has been put into positive marketing of services..."[11]

17. In this context, the challenge is whether African information services can unequivocally demonstrate that the degree of utilization warrants the scarce resources their governments need to make available.

18. Experience gained in the implementation of the PADIS programme over the last seven years reveals that information and documentation activities operate in an environment where awareness about information issues at the political level are ambivalent; resource flows are extremely constrained; the supply and demand for information are at an imbalance; and, the quality of information personnel leaves much to be desired while information – related education and training need considerable adjustment.[12] The key to changing the tide of limitations information services are encountering has to come from within the information community itself.

19. In this context, it is essential that information practitioners do not remain librarians, documentalists or information scientists alone but that there should emerge a class of information managers who act as politicians and defend the cause of information at political forums; as salesmen who sell competitive information products in a difficult market-place; as public relations officers who form and change information consumption habits; and as managers who raise the increased financial, technological and human resources required for information pursuits. This is perhaps the most difficult challenge the African information profession faces today.

V. ON HOW TO MEET THE CHALLENGES – EDUCATIONAL, INSTITUTIONAL AND TECHNOLOGICAL RESPONSES

20. The nature of the information education/training, information technology and institutional response determines success or failure in meetinmg the above challenges – extremely complex challenges – African information services face.

For better or worse, Africa has to rely, in the medium to longterm on its information manpower of today – its librarians, documentalists, its few information scientists and statisticians. Neither by education and training nor by experience is the existing manpower prepared for the challenges it faces today. This is the contradiction between what is required and what is available in the medium term. And it has to be reconciled. The reconciliation should materialize partly in the form of continuing education and in-service training and partly in the increased initiative, motivation and commitment the information practitioner himself has yet to demonstrate.

22. The quality of information education has to dramatically change in at least three ways so as to produce the information manager mentioned earlier: first, the substance of library education has to change in favour of what is presently referred to as information science education and so as to take account of modern methods of information handling; second, the level of education has to be extended to post-graqduate and doctoral-levels; and third, there should be an effort to produce, however difficult that may prove to be, poly-functional practitioners. Equally, there is an urgent need for the educational system to pruduce information scientists who are, *priori*, conversant with present-day information technologies. The information scneitist should be the agent who introduces information technologies.

23. Appropriate institutional responses by way of approachers, organizational set-ups, policies, adequate financial resources, coordination and modalities for multi-national cooperation will be additional pre-requisites to the advancement of information services, in general, and the introduction of information technologies in particular.

24. As stated in the beginning, the on-going and expected change in the African information scene is not and will not be technology driven. Africa should resist that temptation in spite of the fact that existing information services-ranging from public and university libraries to statistical offices-are scrambling to automate. The predecessor of automation – mechanization – has not solved Africa's ills; there is no guarantee that its successor will.

25. This does not mean that information technologies shoudl not be introduced. In fact the trend is such that at best, the introduction of information technologies is inevitable; at worst one fears it will be indiscriminate.

26. Therefore, it is incumbent upon Africa to prepare the manpower and organizational groundwork either in advance or in parallel to the introduction of modern information technologies if it is not to repeat previous mistakes committed in importing major technologies.[13]

27. One would further advise two rules of thumb: first, information technologies should be introduced only in those cases where support services are available – manpower, maintenance, supplies; and second, only if it can be demonstrated that they will generate new products and services or higher levels of utilization of existing services

VI. THE PAN-AFRICAN DOCUMENTATION AND INFORMATION SYSTEM

28. Notwithstanding the above shortcomings and however minimal the results appear to be, it seems the attention given to and actions towards information pursuits by African governments are changing for the better. The creation of the Pan African Documentation and Information System is just one case in point. PADIS is an African regional programme created in 1980 and executed by the United Nations Economic Commission for Africa based in Addis Ababa (Ethiopia).

29. The objective of PADIS and the actions being depolyed to realize them revolve around two points: first, to give impetus to and to assist African governments in modernizing and reorganizing their information services; and second, to implement a region-wide multi-sectoral information system and network that will effectively demonstrate how the modernization of information services will take effect and what results could be obtained.

30. In the pursuit of putting in place the right organizational and institutional environment for the advancement of information services, PADIS provides advisory assistance in information policy and plan formulation; assessment of national information situations; choice of

information technologies; information systems design and implementation; selection of lead institutions for information affairs and in the coordination of information services. It provides training in policy and managerial aspects of information systems development, computerized documentation techniques, and in the construction and utilization of statistical data banks.

31. The pursuit for a region-wide decentralized information system involves creating links with national socio-economic information systems; the development and promotion of the use of common information classification systems among the network of participants; the delivery of training to staff of national centres; the collection, processing and dissemination of information; the maintenance and updating of computerized data bases; and, the delivery of services including current awareness, SDI, question/answer services, publishing of bibliographic indexes and and statistical yearbooks, on-line services, etc. In its role as an information service PADIS handles bibliographic and statistical data and referral information on African experts, institutions and projects.

32. With implementation of the above activities it is hoped that PADIS will contribute to meeting the challenges put forth earlier in the paper, particularly those concerned with expanding and upgrading existing skills and know-how; introducing modern methods of information handling; providing information required for priority development pursuits; the development, testing and replication of modern information applications; and, the generation of innovative information products and services.

NOTES AND REFERENCES

1 The phrase "information services" is consistently used to represent the amalgam of services provided by all varieties of libraries, documentation centres, information centres as well as the dissemination components of statistical offices.

2 M.A.R. Ngwenya and P.K. Bugembe, "The origins and causes of the African social and economic crisis", (Addis Ababa: UNECA, 1987), p.6.

3 Samir Amin, "The interlinkage between the agricultural revolution and industrialization: alternative strategies for African development", (Addis Ababa: UNECA, 1987), p.6.

4 *Ibid.*

5 *Ibid.*, pp. 13-14.

6 A.D. Hazlewood, "Economic integration: lessons for African recovery and development", (Addis Ababa: UNECA, 1987), p.1.

7 K.J. Mchombu, "Information systems in support of rural development", (unpublished typescript, 1987, pp. 18-19).

8 K.T. De Graft-Johnson, M.M. Shah, and H. Mends, "Improving information flows on the follow-up process to African economic recovery and development", (unpublished typescript, 1987, pp.24, 37). This report provides a description of the information system as well as a detailed list of the indicators and related information required to monitor the efforts of African countries for economic adjustment, recovery and development.

9 Pan African Documentation and Information System (PADIS), "A perspective on elements of a strategy for the development of information infrastructure and services in sub-Saharan Africa", Paper Presented at the the Workshop on the Development of an African Strategy for the Information Sciences Division of IDRC, Nairobi, Kenya, 29-31 March 1987, 15 pp.

10 E. Baark, "The context of national information systems in developing countries", (Lund, Sweden: Research Policy Institute, 1986), pp. 55-64.

11 *Ibid.*, pp. 116.

12 *Ibid.*, PADIS, "Elements of a Strategy".

13 Report on the World Social Situation – 1985; (New York: United Nations, 1985), pp. 43-45. This report contains lucid observations on the diffusion of technology and the need for the right scientific, technical and organizational conditions citing the outcomes of the green revolution in Africa.

11-ASIA-1-E

THE COMPUTER AND KNOWLEDGE INFORMATION DEVELOPMENT IN MALAYSIA: SOME PERSPECTIVES

Edward LIM Huck Tee, *Universiti Sains Malaysia Library*

INTRODUCTION

Since the 1960's many writers have observed that the industrialized countries have experienced a decline in theri secondary industries (mainly manufacturing) and a steady rate of growth in their tertiary (mainly service) industries. This phenomenon can best be seen in terms of the contributions of the tertiary sector to employment and the Gross National Product. Writers have also noted that at least in the industrialized countries more and more workerts are becoming involved in information oriented activities.

The growth of the information economy in the United States was first postulated by Fritz Machlup who attempted to measure the production and distribution of knowledge (Machlup, 1962). Since then many attempts have been made to measure the size of the information economy in the United States. The most well known attempt has been that undertaken by Marc Porat, whose study tried not only to define and measure information activity in the U.S. economy, but also to examine the structure of the information activity with respect to the rest of the economy and the implications occasioned by the evolution of the U.S. economy from one based primarily on manufacturing and industry to one based on knowledge, communication and information (Porat, 1977).

What Porat has termed the "information economy", other scholars and writers have variously called "the postindustrial society" (Bell, 1979), "the Third Wave" (Toffler, 1980), the technotronic age, the electronic era, the space age and so on. Whatever the term used, the central fact is that the industrialized societies and economies are evolving from a goods producing to a service society and that the new intellectual and strategic tool is the computer and its associated technology.

Even in a developing country like Malaysia, the tertiary sector is growing quite rapidly and is beginning to make extensive contributions to the Gross Domestic Product as well as to employment. Table 1 shows the GDP of the Malaysian economy by sector and illustrates quite clearly the declining contribution of the primary agricultural sector and the increasing contributions of the secondary and tertiary sectors.

Thus the primary sector's contribution to GDP is expected to decline from 37.1 per cent in 1970 to 17.7. per cent by 1990, while the secondary sector is expected to grow from 17.3 per cent to 31.8 per cent during the same period. Similarly, the tertiary sector will grow from 41.9 per cent to 47.2 per cent. The structural change in the Malaysian economy is also reflected in the rates of growth of occupational employment among the different sectors. Between 1970 and 1980, the proportion of the total work force in the primary industry declined from 50.5 per cent to 40.6 per cent, while the proportion of the secondary sector work force increased from 21.4 per cent to 26.5 per cent and the tertiary sector work force from 28.1 per cent to 32.9 per cent (Fourth Malaysia Plan, 1981-1985, p. 91).

However, it is difficult to isolate the information activities of Malaysia's tertiary sector from those of the traditional service industris. It is probably not unreasonable to assume that the knowledge and information activities (e.g. banking, the media, publishing, data processing, telecommunications, education, research and libraries) constitute only a small proportion of the tertiary sector activities which are still strongly oriented towards what some economists have called the "hard" activities of the traditional service industries (e.g. transportation, energy utilities, buying and selling, government and other personal services). It is not the intention of this paper to measure the size of the information economy in Malaysia. However, the above discussion is intended to give some idea of the structural changes that are occurring in the Malaysian economy. The sections that follow will focus more narrowly on the twin engines of the information economy – the computer and telecommunications – and their implications for the future of Malaysian society.

COMPUTER USAGE

Data about the use of computers in Malaysia is notoriously unreliable and difficult to obtain. The fact is that nobody seems to have a clear idea of what is happening; as a result different sets of data are quoted by various authorities, thus making it extremely difficult to determine the reliability of the data.

What is clear is that there has been a sudden and unexpected increase in the use of computers in Malaysia in recent years. A survey carried out recently by the Modernization of Administration and the Manpower Planning Unit (MAMPU) of the Prime Minister's Department showed that the annual growth rate of computers used in government since 1977 is 25 per cent and that the total imported value of computer hardware since 1978 has quadrupled to about M$70 million (U.S.$1.00 = M$2.50). In 1980, the Malaysian Computer Society carried out a survey of the number of computer installations in Malaysia. Of the 420 computer installations that it identified, 320 units (approximately 76 per cent) fell into the category of minicomputers. mainframe computers numbered about 40 and were projected to reach 100 by 1985. In fact, in the few years since the MCS survey, the number of mainframe and minicomputers has increased at a much

TABLE 1. MALAYSIA: GROSS DOMESTIC PRODUCT BY SECTOR OF ORIGIN, 1970-1990

SECTOR	1970		1980		1985		1990	
	$million in 1970 prices	Share of GDP (%)	$million in 1970 prices	Share of GDP (%)	$million in 1970 prices	Share of GDP (%)	$million in 1970 prices	Share of GDP (%)
PRIMARY SECTOR								
Agriculture, forestry & fishing	3,797	30.8	5,809	22.2	6,720	17.8	8,193	14.4
Mining & quarrying	778	6.3	1,214	4.6	1,607	4.3	1,863	3.3
Total Primary	4,575	37.1	7,023	26.8	8,327	22.1	10,056	17.7
SECONDARY SECTOR								
Manufacturing	1,650	13.4	5,374	20.5	9,040	23.9	15,121	26.6
Construction	475	3.9	1,186	4.5	1,824	4.8	2,938	5.2
Total Secondary	2,125	17.3	6,560	25.0	10,864	28.7	18,059	31.8
TERTIARY SECTOR								
Electricity, gas & water	229	1.9	592	2.3	953	2.5	1,500	2.6
Transport, storage communications	581	4.7	1,696	6.5	2,492	6.6	3,834	6.8
Wholesale & retail trade, hotels & restaurants	1,633	13.3	3,295	12.6	4,841	12.8	7,279	12.8
Finance, insurance, real estate & business services	1,036	8.4	2,155	8.2	3,079	8.1	4,629	8.2
Government services	1,367	11.1	3,398	13.0	5,228	13.8	8,044	14.2
Other services	306	2.5	657	2.5	948	2.5	1,459	2.6
Total Tertiary	5,152	41.9	11,793	45.1	17,541	46.3	26,745	47.2

faster rate than predicted and today they number more than 800 units.

The unreliability of even very informed forecasts is clearly shown in the area of microcomputers. When the Malaysian Computer Society survey was undertaken in 1980, there were only 60 microcomputers used in industry, business and government. It was then projected that the number of microcomputers would increase to 150 units by 1982 and to 450 units by 1985. However, according to S.H. Kon, an official of MAMPU, there were more than 2,166 units of microcomputers and personal computers worth more than M$22.5. million at the end of 1982 (*New Straits Times*, 10.3.84). How was it possible for the Malyasian Computer Society's forecasts to be so wildly wrong? The steep fall in the price of hardware is one of the principal reasons. In 1980, the price of a microcomputer in Malaysia ranged from M$25,000 to M$100,000. But today it is possible to obtain a small business computer for less than M$5,000.

The growth in the usage of microcomputers in Malaysia has been nothing short of phenomenal. Of course, the number of microcomputer units in Malaysia is only a small fraction of that in the developed countries. In Britain, for example, it has been estimated that one in 25 families have access to microcomputers, while in the U.S. some four million households have microcomputers and it has been forecast that by the year 2000 A.D. most American homes would have microcomputers. The microcomputer has not made the same inroads in Malaysia. Nevertheless, it is quite clear from reports in the media that interest in microcomputers is growing very rapidly, and this growth has to a large extent been helped by the introduction of computer literacy programmes in the schools, the availability of useful software for business and home consumption, and the decreasing cost of hardware.

The government sector is the largest single consumer of computer technology with about 130 installations in 1980. This reached about 200 by the end of 1984. The largest computer system in the government sector is that located in the Prime Minister's Department, which serves several government agencies, including the Treasury, the Economic Planning Unit, the Public Services Department and the Standards and Industrial Research Institute.

The Malaysian Computer Society survey of 1980 gave a breakdown of the locations of the 420 computer systems identified as follows:

Government	130
Wholesale and retail	66
Agriculture	56
Banking and finance	53
Education and research	37
Computer services and consultancies	32
Manufacturing	24
Utilities	12
Petroleum and mining	10

TELECOMMUNICATIONS

The spread of computers in Malaysia, while by no means as rapid as that in a developed country like the U.S. or the United Kingdom, may be regarded as quite spectacular and the number of installations is estimated to increase by 30 per cent per annum. This growth has, however, not been matched by the growth of the other component of the information revolution – telecommunications. Although there has been a demand for better and more sophisticated telecommunication facilities for a long time, the Telecommunications Department has been relatively slow in improving the telecommunications system. In 1986, the Government privatised the Telecommunications Department, and this can be expected to lead to vastly improved services. Malaysia currently has three networks, viz. the Public Telex Network, the Public Switched Telephone Network and MAYPAC, the packet switching network introduced in April 1985. For a long time, data communications by computer could only be achieved through leased circuits at very high costs. However, in 1983 Telecoms introduced a dial-up service called DATEL which is a switched data transmission service over the telephone network at a very slow speed of 2400 bps as compared to the leased circuit speed of 9600 bps. The DATEL service is intended for use by smaller organizations whose data transmission requirements are not voluminous enough to justify the cost of a leased circuit. The introduction of MAYPAC has to some extent revolutionised data communications in the country, because this has resulted in the development of on- line information services, the introduction of a pilot videotex service called Telita, the ability to access remote databases both within and outside the country, and increased use of telefacsimile facilities.

COMPUTER PERSONNEL

The sudden and tremendous growth in the use of computers in Malaysia has not been matched by the necessary increases of computer personnel, such as systems analysts and programmers. According to the Economic Planning Unit's *Report of manpower survey in Malaysia, 1973*, there were 115 systems analysts in 1973 and this would increase to 176 by 1980 and 315 by 1990. Like all other forecasts of the computer industry, this forecast has proved to be quite wrong, and as early as 1981, according to one industry source, there existed at least 300 vacancies for computer personnel (*Malaysian business*, June 1981, p. 14). This shortage has led to a lot of undesirable consequences such as job-hopping, uncompleted projects and underutilization of existing computer resources. Table 2 provides an estimate of the cumulative requirements for computer scientists in Malaysia until 1990.

TABLE 2. ESTIMATED NEEDS FOR COMPUTER PERSONNEL IN MALAYSIA

Year	Cumulative manpower requirements	Additional annual requirements
1983	2226	-
1984	2535	309
1985	2865	330
1986	3214	349
1987	3584	370
1988	3975	391
1989	4388	413
1990	4823	435

The above estimates should be considered as merely indicative of needs because most of the forecasts of manpower needs have proved to be under-estimations. In fact, according to a representative of the Malaysian Computer Society, the demand for computer personnel should increase by about 25 per cent annually. This estimate is only for installations with mainframes and does not include the requirements of those organizations with minicomputers or microcomputers. It also does not take into accojnt any potential leap in the use of computers or new applications other than the normal data processing applications.

Training of computer personnel has been provided at Universiti Sains Malaysia (USM) since 1974, through the School of Mathematical and Computer Sciences. About 100 computer scientists are trained annually by USM. In addition, training is provided by the other local universities at diploma as well as degree levels, by the Institut Teknologi Mara, by Intan (the Public Administration Institute), and by a large number of private schools and colleges. Many of these programmes were begun in anticipation of an increase in the demand for computer personnel. Unfortunately, however, the recession in Malaysia in the past two years has led to an oversupply situation leading to some unemployment of new graduates.

COMPUTER APPLICATIONS

It is not possible to enumerate or provide a full inventory of all the computer applications in Malaysia. As shown in Table 3, the range of applications is very wide and cover many public and private sector activities. Computers are increasingly being used in banking, finance, insurance, education, publishing, energy utilities, health and medicine, planning, transportation, law enforcement, office automation and management information systems. Most of the applications are in the traditional areas of data processing, although there are some limited applications in more creative areas such as automatic translation, planning, simulation and modelling.

TABLE 3. SELECTED INVENTORY OF COMPUTER APPLICATIONS IN MALAYSIA

APPLICATIONS	EXAMPLES OF IMPLEMENTATION AGENCY	STATUS OF IMPLEMENTATION
BANKING & FINANCE		
Electronic Teller	Most banks	Major towns
Stock exchange	K.L. Stock Exchange	Major towns
Electronic funds transfer	Bank Negara	Kuala Lumpur & Petaling Jaya
EDUCATION		
CAI & CAL	Most universities	Experimental
MIS	USM	Planning
MALMARC system	UKM;UPM;UUM; UM;USM;Nat. Lib	Implemented
Information storage & retrieval	USM;UPM Nat. Lib	Partial
PUBLISHING		
Newspapers	New Straits Times	Implemented
Automatic translation	USM & Dewan Bahasa	Under development
Books & report preparation	All universities; Dewan Bahasa;private publishers	Implemented
ENERGY		
Energy grid management	National Electricity Board	Implemented
HEALTH & MEDICINE		
Hospital	Min. of Health	Planning
Drug abuse monitoring	USM	Implemented
PLANNING AND LAND ADMINISTRATION		
NIDAS	ICU	Pilot system
Land data	Min. of Land and Regional Dev.	Planning
Property information	Municipal Council, Penang	Planning
Population data	Dept. of Statistics	Implemented
TRANSPORTATION		
Airline reservation	MAS	Implemented
Vehicle and driving licences	Road Transport Dept.	Partial
LAW ENFORCEMENT		
Personal data	Income Tax Dept.; Public Services Dept.; EPF;National Registration;Police	Implemented in some; planning in others
OFFICE AUTOMATION		
Word processing, Data management, Spreadsheets	Most private companies and some govt. depts.	Implemented

In the sections that follow, a few case studies of actual computer applications will be used to illustrate some of the more important uses of the computer in Malaysia.

THE NIDAS PROJECT

NIDAS is an acronym for a pilot project to develop a national integrated system by the Centre for Policy Research, Universiti Sains Malaysia for the Malaysian Government. The project was first mooted in 1975 by professor Kamal Salih, then Dean of the School of Social Sciences and Professor K.J. Ratnam, then Director of the Centre for Policy Research (Kamal Salih & Ratnam, 1975). In general, the project attempted to produce a conceptual framework for the integration and the collection of data generated in the course of government activity as well as to develop a computer-based system to process and retrieve the data.

The basic approach taken was to identify the existing available data in various government agencies that could serve as a source of data to NIDAS. The primary files identified included land data, census and population registers, property information, health, education, labour and manpower, development projects and business. Where particular socio-economic data were lacking, a census was carried out. Because of limitations of time and manpower resources, the project originally concentrated on the integration of a selected number of data bases, limited mainly to Penang and Kedah. These included land data, property information, census and population data and data obtained through a socio- economic census. The various operational data bases were linked by a geocoding system which was created by building up a geographic data base containing three directories i.e. Lot Geocode Directory, Geoaddress Directory, and Address Directory. Although retrieval of data was principally through the use of the geocoding grid system, tha capability to extract information about individuals was also provided. The project took about three years to complete (1976-1979). But the final report and documentation were not completed until 1981.

The NIDAS Project demonstrated the feasibility of creating an integrated data base using information generated by government activity. However, its full implementation would take time and is dependent on the development of various component data bases by other government agencies. Already activity in this sphere has begun and the principal payoffs of the NIDAS Project have been the planning and development of various computerized land data and property information systems. The staff of the Centre for Policy Research have served as consultants for a number of these projects, including the Klang Valley Regional Planning Information System (Chee, 1982), the Land and Property Information System of the Penang Municipal Council (USM. Centre for Policy Research, 1982a), the Penang Land Data System (Cook, 1982; USM.Centre for Policy Research, 1982b) and the feasibility study for the creation of a computerized land data bank for the Ministry of Land and Regional Development (Malaysia. Ministry of Land and Regional Development, 1983).

The ethical issues relating to the development of a system such as NIDAS, unfortunately, has not exercised the minds of the planners of this system. In their view, the main purpose of NIDAS is the development of information systems which can help the government in its planning and monitoring activities. However, because of the system's ability to integrate information captured by various government agencies about a particular individual (e.g. government personnel records, income tax, land and property information, national registration, health) there are some serious ethical issues relating to the invasion of personal privacy which have to be resolved.

COMPUTERIZED INFORMATION SYSTEMS

NIDAS is concerned with the development of computerized information systems for government. On the other hand, libraries have been in the forefront in the development of bibliographic and other kinds of computerised information systems. although there is currently no operational integrated library system, the Universiti Sains Malaysia Library is in the process of implementing the DOBIS/LIBIS system, and it is hoped that the online cataloguing and circulation control modules can be launched before the end of the year. Other libraries which have advanced plans to acquire integrated systems include the National Library of Malaysia, the University of Malaya and the Universiti pertanian Malaysia (University of Agriculture).

A survey undertaken in 1985 of the libraries who are directly or indirectly members of PERPUN (the standing conference on university and national libraries in Malaysia) showed that most of these libraries have some access to computers (either mainframes, minicomputers, microcomputers or a combination of these).

The national Library of Malaysia and all but one of the university libraries are participants of the MALMARC system – a centralized cataloguing system operated by the Universiti Sains Malaysia Library. The MALMARC system (which was started in 1979 with three institutions) is now used to create the individual catalogues of the participating libraries, the union catalogue database (about 300,000 records), the PERPUNET database (a union list of serials database of some 20,000 records), and the Malaysian National Bibliography database. A number of libraries have also created specialized databases using software packages running on microcomputers, such as CDS/ISIS mini-micro version and dBASE (II, III or III plus). In addition, various special libraries, such as those of the Rubber Research Institute of Malaysia, the Palm Oil Research Institute of Malaysia, and Petronas (the national petroleum organisation) have created specialized databases using MINISIS, a popular information storage and retrieval software package (usually provided free of charge by the International Development and Research Centre to nor-profit institutions) which runs on the HP 3000 series of minicomputers.

The number of institutions engaged in creating a wide variety of databses (both bibliographic and non-bibliographic) is quite large. To some extent, they will help to fulfil the national need for indigenous information systems. External information systems are also important, and the availability of MAYPAC, the telecommunications authoritiy's packet switching network, has made it possible for libraries and other institutions using microcomputers, modems and appropriate communications software, to access external databases and information systems.

SOME SOCIAL AND ECONOMIC ISSUES

The extent of computer penetration in Malaysian society is not very clear. There is definite evidence that its usage is increasing at a very rapid rate. The social problems that computers are likely to raise are less obvious than thos associated with some other technologies, for computers do not destroy amenities or injure the physical environment. However, the economic and social effects may initially be quite serious especially for a developing country like Malaysia. Many writers have already written extensively about computers and social change and it is not my intention to rehash their arguments or predictions. Because the socio-economic and political conditions in Malaysia are different from those of many developed countries and because Malaysia will have to rely on imported technology, the issues and problems relating to the introduction and spread of computers and other associated technology in Malaysia will not be identical to those faced by the developed countries. The number of issues that could be discussed is legion. but in this paper, only a few of these issues will be highlighted.

THE EMPLOYMENT PERSPECTIVE

Social scientists have generally disagreed on the severity of the impact of new technological developments on employment opportunities. Usually, with the introduction of a new technology, the result is what has been called "technological desplacement" where individuals with outdated skills are displaced and become unemployable unless they are retrained in the new skills. Pessimists see in the new information technology several threats to workers in the developing countries and their pessimism is based on a number of factors.

With increasing automation and the use of robots in the manufacturing process in the developed world, the traditional advantage of cheap labour that Third World countries have vis-avis the industrialized countries will be lost. The availability of cheap labour in Malaysia as well as in many of the ASEAN countries, for example, has resulted in the growth of many labour intensive industries such as textiles and electronics. According to the Malaysian Treasury *Economic report*, 1983/1984, the electronics industries is one of the faster growing industries in the country. The production of electrical machinery, appliances and electronic components grew by an estimated 50 per cent in 1983. However, within the last one and a half years there has been an increasing trend for the large multi- nationals to relocate the electronics components industries back in their home countries, because automation and robotics have reduced the comparative advantage of low labour costs that the Third World countries have enjoyed and because the new production methods have made it economically viable to integrate all the manufacturing processes from component assembly to final product at one location.

To get an idea of how serious this trend will be for Malaysia we should note that between 1970 and 1980 Malaysia moved from a situation of labour surplus to one of general labour market tightness because of the growth of labour intensive industries. There were indications of labour shortages in agriculture and in specific manufacturing industries and locations. In all its planning the Government has placed a great deal of hope on the manufacturing sector continuing to be a main source of growth and employment in the 1980's. If present trends continue, there is every likelihood that this

hope will not be realised as Malaysia loses it comparative advantage as a country with low labour costs.

Apart from the threat of unemployment to workers in the manufacturing sector, there is also some fear that workers in the tertiary sector may suffer the consequences of automation. In Malaysia, the tertiary sector has also been an important labour absorbing source. The major employer in this sector is the government. According to the headlines on page one of the *New Straits Times*, March 11, 1984, the public service employs 1.2 million people, which is 23 per cent of the total national workforce of 5.2 million. This means that about one out of every 4.35 Malaysian is working for the government. The recession coupled with the government's stated policy of reducing the number of workers in the government service through the privatisation of many of its activites will eventually reduce the role of government as a large source of employment in the future. One way of maintaining productivity with a reduced workforce will definitely be through automation. As we have already shown, the government sector is the largest single user of computers at the present time, and it is likely that the trend towards the increasing use of computers will continue. At the same time, the private sector because of the availability of cheap computers will also intensify its computerization activities to save costs, to provide better customer services and to be able better to withstand competition. Thus a serious situation would arise if the use of computers were to reduce the service industries' demand for labour just when it was hoped that their expansion would absorb workers displaced from the manufacturing sector by automation.

The consequences of large unemployment of workers in the secondary and tertiary sectors would be far more severe for Malaysia than for the developed countries because there are no social welfare benefits to cushion the impact of unemployment. Furthermore, there is no strong trade union movement in the country due to restrictive legislation and other reasons, and as a result there is no pressure for management to soften the blow of unemployment as would occur in the developed countries. In the developed countries, because of the strong trade union movement, the introduction of new technology in the factory and in the office by management is seldom accomplished without much resistance from the workers; and only after there is assurance that there will not be severe technological displacements would the workers agree to the introduction of new technology. Management is also often willing to retrain the workers or to provide adequate compensation benefits. This would not occur in Malaysia as firms can generally retrench staff without too much difficulty and multinationals can just pack up and go without bothering about the social consequences that redundancies will create. Moreover, with the loss of agriculture's traditional role as an important source of employment, it can no longer be relied upon to absorb the displaced workers.

If the above scenario turns out to be true then the social dimensions could be quite severe. I think the important point to note is that when new technology was introduced during the industrial revolution, the people who were displaced were those from the lower working classes. However, the information technology revolution will cause a large proportion of white collar workers (the professional, techincal, administrative, managerial, clerical and other service workers) to be displaced for the first time. The white collar class has traditionally been a conservative class forming the backbone of most political institutions and governments. They provide the political stability and support so necessary for economic growth and development. As Mills has pointed out, they tend to be apolitical; their "occupational ideology is politically passive; they are not engaged in any economic struggle, except in the most scattered and fragmentary sense...they do not feel any sharp crisis specific to their stratum." (Mills, 1953, p.352) However, should this class be threatened with massive unemployment, its members could become radicalized; and if alienated they could become extremely dangerous to the stability of the political system, for their knowledge and organizational ability would constitute a serious threat to any government. They can become "techno-rebels", like the Luddites of the industrial revolution, and they will question the very basis for the choice of any particular technology that does not serve social and ecological goals (Toffler, 1980, p.167).

The above discussion is of course based on a pessimistic scenario. In real life, the results of any introduction of new technology have always been contradictory. Toffler argues that it is wrong to relate investment in mechanization and automation to levels of employment for there may be no correlation between levels of employment and the introduction of automation. for example, between 1963 and 1973 Japan had the highest rate of investment in new technology, as a percentage of value added, of any country in a seven- nation study. It also had the highest growth in employment. Britain, whose investment in machinery was the lowest, showed the greatest loss of jobs. The American experience roughly paralleled that of Japan, while Sweden, France, West Germany and Italy all showed markedly individual patterns. As a result Toffler concludes that "it is clear that the level of employment is not merely a reflection of technological advance. It does not simply rise and fall as we automate or fail to do so. Employment is the net result of many converging policies." (Toffler,1980,p.209).

THE ECONOMIC PERSPECTIVE

The Malaysian Government inaugurated a new strategy for development called the New Economic Policy in 1971. This policy has a two-pronged objective, namely poverty eradication and the restructuring of society so as to reduce and eventually eliminate the identification of race with economic function. In this second pronged objective, the Government has tried to restructure employment by increasing the representation of Malays ans other idigenous people in the modern sector in line with the racial composition of populaion at all levels. It has also tried to reduce imbalances in the ownership of assets and wealth through ensuring that at least 30 per cent of the equity capital and effective management of various enterprises are set aside for Malays and other idigenous people. The strategy, in other words, is based on what is appropriate for "second wave civilization" or the industrial phase of civilization, where the strategic resource is financial capital. But in the postindustrial or Third Wave society into which Malaysia will eventually move, the strategic resource is not financial capital but knowledge and information. Knowledge and technical competence will become the main requirements for elite positions in the future and it has been argued that the knowledge elite will become the technocratic rulers of society. While it may be some time before the Malaysian economy becomes largely based on knowledge and information activities, it might be useful to reexamine the strategy of the New Economic Policy to see whether or not the current emphasis on capital acquisition should not be re-oriented towards that of knowledge acquisition and development. Already there is some evidence to show that the elite classes in Malaysia are poised to take advantage of Malaysia's eventual evolution into an information economy. Laver has argued that:

"The advance of information technology...could make the information-rich even richer, and widen the gulf between them and the information-poor. This is a troublesome possiblity because the information-poor will tend to be those who are also deprived economically and educationally, and who are thus most in need of the benefits that better information could bring. It seems likely that the provision of improved information services will be divisive between human and social groups, even though it is at the same time integrative between institutions and organizations." (Laver, 1980, p.20)

THE POLICY PERSPECTIVE

Considering the potential impact of computers and telecommunications on society, there has been surprisingly little discussion on the policy implications of the new information technology. Not only is there no national information policy but there is also no policy relating to the use of the new information technology which has crept willy-nilly into all spheres of government and private sector activities. Because the Malaysian economy is relatively internationalized, and because the government is very keen to privatise some of its activities, it is unlikely that restrictions will be placed on the use and import of computer technology. In spite of this, there are many policy issues to be considered. Porat has pointed out that:

"The rapid diffusion of computer and communication technologies carries tremendous force, as evinced by the changes following the diffusion of industrial technologies. With each new application of information technology, economic or social tensions may surface. Some might be resolved by market forces, common sense or luck. But many more, not easily soluble or analytically obvious, will rise to the level of policy issues." (Porat,1977,p.205).

In societies where there is a tendency towards more authoritarian forms of government, the advent of the new information technology poses both a challenge and an opportunity. Governments in developing countries have traditionally been keen to filter and censor information. While this may be politically motivated, it is also partly alturistic stemming from the desire to protect the citizenry from the more degrading aspects of foreign culture and partly nationalistic arising out of the desire to shape the thoughts and culture of the citizens through the selective dissemination of "appropriate" information. But the new information technologies will make it extremely difficult for government to control the dissemination of information. Already the influx of video tapes from other countries has created problems for the government in its effort to build a nation based on a common set of values, language and culture. Current

improvements in the technology of small disk antennas will also make it easier for the citizens of a country to tune in to foreign TV programmes in the future. In the same way, anyone in Malaysia with a microcromputer could conceivably gain access to any foreign information source or database. In such a situation what policies should government adopt in respect of information access?

Another important policy issue that is likely to crop up relates to the use of computers by government to limit individual freedom, to monitor and to control. The NIDAS system actually contains the seeds of such a control system, although it was originally developed for planning and project monitoring purposes. The temptation to develop systems to police and undertake political surveillance is more likely to occur in societies which are subject to authoritarian controls, and the sophisticated advances in information processing technology will make it realatively easy to develop such systems. It is therefore important that in the developing countries where democracy is still practised some form of institutional or legal restraint should be available to check bureaucratic abuse. The impact of the new information technology across all sectors of the economy and society is too important to be left solely to market forces or to a handful of technocrats or ideologues. Policies regarding its use should be the concern and require the participation of an informed citizenry.

CONCLUDING REMARKS

There are obviously many issue that could be discussed. And one could write a whole book on these issues. I have highlighted what I believe to be important issues in the context of Malaysia. What is important to realise is that the computer is not the panacea for all ills and that it cannot solve the human condition if there is no political will. Finally, I think that like Joseph Weizenbaum (1979), Professor of computer science at MIT, one should maintain a healthy sceptism regarding all the euphoric prophecies about the benefits of computers to civilization.

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NEW DEVELOPMENT OF SCIENTIFIC AND TECHNICAL INFORMATION SERVICES IN CHINA

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ABSTRACT

Scientific and technical information services in China have a long history and have made significant progress during the recent years, but are still far behind the needs for them. This situation recently became more obvious because of the economic reform and open policy of China which has led to greater demands for better information services.

The information professionals of China have realized that information is a special commodity which can be measured in terms of intellectual-labour-time and regarded as a special resource which can be shared without losing its value. This discussion led the Institute of Scientific and Technical Information of Shanghai to propose "information actuation" which has been widely accepted within the field of information science in China.

Some concrete measures have been taken, new information services have been created, lateral links have appeared which are changing the vertical, tree-like information system into a network and this is considered as important progress in information services in China.

"Newcomers" have entered the information service circles. This implies competition in the provision of information services, and forces both professional and nonprofessional information organizations to find more efficient ways to serve their clients, who will in the long run benefit from this development.

"Technology market" is a new kind of information clearinghouse in China which usually takes the form of exhibitions or fairs and in which information can be traded directly.

Introduction

Scientific and technical information services in China are under rapid development. This paper is a brief description and analysis of what the Chinese people, working in information service circles, are doing, and what they have achieved, and reflects the author's personal opinion on this situation.

Scientific and technical information services in the People's Republic of China have a relatively long history. The national scientific and technical information center, Institute of Scientific and Technical Information of China (ISTIC) was established in 1956.

Institute of Scientific and Technical Information of Shanghai (ISITS), from which the author comes, was established in 1958. Today all the provinces, autonomous regions, municipal cities (Beijing, Shanghai and Tianjin) and all the industrial ministries have S&T information institutes. Most of the major cities under the provincial level and large state-run industrial enterprises have S&T information institues or departments. These information organizations are financially supported by the government or their parent enterprises and are usually regarded as non-profit organizations. During the past six years they have received larger budgets, more foreign currency, more manpower and advanced equipment from the government than in the last two decades and thus developed at a tremendous speed. For example, by the end of 1985, more than sixty terminals have been installed in 10 cities. These terminals are able to access international online retrieval systems such as DIALOG and ESA-IRS, as well as databases within China based on about sixty bibliographic database tapes imported from abroad. There is a nation-wide S&T information retrieval system construction project, ISTIC is the national center for this system. Substantial proof that China's S&T information science has made great progress is illustrated by the fact that more than seventy universities and colleges have librarianship and information science departments; universities and certain information institutes like ISTIC and ISTIS have postgraduate education programmes. Postgraduate students who get their Master of Science degree after 2-3 years of study are the coming generation of information specialists in China.

Facing Challenge of Urgent Information Demands

The development of S&T information services in China, however, are always behind the demands for these services and this situation has become even more obvious since China began to carry out her open policy and economical reforms. A considerable part of S&T information services are aimed at industrial enterprises. These industries now have more autonomy to choose appropriate

technology, to determine what kind of products to manufacture and to find new markets in China and abroad. Naturally their next problem is to get all the necessary information about technology, products, markets etc. to support their decision making.

In China 267 cities (93.6%) have a population of less than one million, 74.3% of the industrial enterprises are in these small and medium-sized cities and their industrial output accounts for more than half of the country's total industrial output. These enterprises have relatively poor information environment. They are usually far away from the well-equipped information centers like ISTIC and ISTIS and the local information facilities are not able to sustain a sufficient document collection to meet these enterprises' needs. Even the engineers of Suzhou and Wuxi, which are among the top five cities in annual industrial output value, have to go to Shanghai and Nanjing frequently to find the S&T information they need. Another new trend is the tens of thousands of rural enterprises which have appeared all over the country, their industrial output in 1986 is more than 330 billion Yuan, which exceeds the agricultural output for the first time. They are small, flexible, but in most cases lacking qualified professionals, stable markets, competitive products and finally sufficient information.

The people working in information services have tried to find a solution to meet the urgent information needs and they began with a discussion of the theoretical problems.

ISTIS first put forward a new concept, "information actuation" which means to convert information contained in documents into information which can be directly used by industrial enterprises and other clients by means of information retrieval, processing and analysis. This idea has been accepted by a lot of information professionals. Meanwhile, with the rapid development in economic reforms in China, the Chinese information professionals began to realize that information is a special commodity whose value can be measured in terms of intellectual-labour-time. Based on this, some of the information services can be charged and income gained from these services can be used to support the development of the information organizations themselves. This theory is absolutely in keeping with the socialist principles. At the same time the Chinese information circles appreciate the following point of view: information is a special resource and, unlike other resources such as oil, coal and timber, it can be shared without losing value. Thus by combining information resources and efforts of different organizations, it is possible to provide better information services to a wide range of users with a relatively small investment in information collecting, processing and dissemination.

Simultaneously with the theoretical discussion, the Chinese information professionals are making great efforts and taking some practical measures to improve their services for industrial enterprises, especially for rural enterprises and the efforts have resulted in a favourable response from the users.

ISTIS established a new department--Shanghai Scientific and Technical Information Consulting Service Center to receive clients from research institutes and industrial enterprises (including those in the rural areas). It can conduct manual or online information retrieval on any clients' requests, the topics covering a variety of technological and engineering fields which are under rapid development in China. Another service at the center, the so called "information channel" service, provides a channel for research institutes, universities and enterprises and so that they have opportunities to exchange information: the research institutes and universities can find markets and clients for their R&D work and the enterprises can obtain new products and the technology they need.

"Information package" is also a new service of ISTIS. Each of the packages has a topic and consists of a set of bibliographic references and a state-of-the-art report. For instance, the package "Electric Fan" consists of information derived from 1000 patent specifications.

Lateral Links

One major progress in information services in China today is that the state-run information organizations have tried to develop lateral links through which they can exchange and share information resources. In China there exist two kinds of vertical, tree-like information systems, one is the comprehensive information system supported by the State Science and Technology Commission and its local countparts, ISTIC being the national center on the highest level and istitutes of scientific and technical information like ISTIS being the provincial centers, and so on. The second system, the professional information system, consists of information organizations supported by the different industrial ministries. These information organizations concentrate on information relating to certain professional fields, for example, electronics, machine building or space technology. Now different kinds of links have been built up within or between these two kinds of information systems. For instance, the Documentation Service Center of an industrial ministry now provides access to its scientific and technical report database and through its cooperation with the China Patent Office its host computer can be connected to several provinces to provide online patent information retrieval.

As the biggest information organization in China, ISTIC coordinates the information services of the whole country and promotes the development of lateral links. It sponsored some seminars to discuss how to develop cooperation in information services in China. At the same time it reinforced its cooperation with the provincial information institutes.

ISTIS sponsored the set up of the East China Information Service Network, another six provincial institutes being involved in the network. They all have very close relations and often exchange documents and information. The directors and professionals in these institutes meet regularly to discuss problems and common interests.

The appearance of lateral links are changing the vertical, tree-like information system into a real network and such a network is more flexible, can open to the whole society and fully utilize the potential information resources we already have. The services of this network will be able to cover more users, including the small and medium-sized enterprises, in a more reasonable way.

Newcomers in the Field of S&T Information Services

Some organizations have seen that S&T information has a tremendous potential. They are entering this field and playing active roles in information provision. They are research institutes, universities, academic societies and private enterprises. These newcomers have brought dynamic energy and intense competition which forces those already in this field to improve their services.

Shanghai Tool Industry Research Institute began its information consulting service in 1982 when 41 clients apprached the institute. This figure increased to 145 in 1984. Most of the 145 clients are small and medium enterprises, some being from the remote provinces. One state-of-the-art report, derived from a thorough investigation about production technique, equipment and markets for the tool industry abroad, has been provided for 280 enterprises. Since this insitute has expertise in the tool industry, it is asked to provide information analysis reports about market forecasting and "package service": from information consulting, product design to mass production design.

In certain cases, people try to combine information services with consulting services. In Shangahai there are about six hundred consulting service agencies among which sixty eight agencies, under a sampling investigation, are related to 4700 consulting projects involving a total investment of more than four billion yuan. During the last three years Shanghai S&T Consulting Service Center of the Shanghai S&T Association, which is an association of nearly one hundred academic societies, has conducted twelve thousand new product development consultations which has resulted in a profit of six hundred million yuan.

Some private information agencies have been set up; one of which is in Wenzhou, Zhejiang Province. The main business of this agency is to collect information from more than one hundred domestic newspapers and periodicals on technology, new products and markets, to compile a newsletter and send it to subscribers all over China.

"Technology Market"

"Technology market" has appeared in China for several years. Usually some information ogranizations jointly sponsor fairs in which research insistutes and universities show new technology and product disigns they intend to sell. They give out samples and illustrating posters, meet and negotiate with representives from enterprises and sign contracts. Gradually the technology market takes the form of a permanent clearinghouse. People are still trying to find the best forms of technology market.

Since the first Patent Law of China entered into force on April 1, 1985 the China Patent Office has recieved 36,000 patent applications, of which about 70% are from the Chinese citizens. More and more people have begun to realize the value of the information contained in Chinese patents and try to make full use of it. A newspaper, "Technology Market" reports the Chincese patents with abstracts regularly. Shanghai Patent Agency has opened a permanent show room which provides a place where both inventors and technology hunters can meet and negotiate about patent licenses. At the same time there are samples and posters in the show room with information about the inventions.

El Papel de las Associaciones Profesionales

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No es reciente el deseo y la necesidad de procurar asociación con nuestros semejantes. Esta urgencia es razón y motivo original del desarrollo de núcleos civicos para después aunar recursos fisicos e intelectuales, adelantos que, compartidos, se manifestarán en el desarrollo de culturas y en los avances de nuestra civilización. Y es que desde siempre el hombre se ha visto impulsado a buscar ayuda y protección entre sus semejantes y para ello ha establecido colectividades, algunas veces minimas como el matrimonio o la familia, y de ahi esos núcleos pasarán a convertirse en tribus o, eventualmente, culminar bajo el concepto político de estados o naciones. Pero, semejantes agrupaciones políticas operan en unos niveles no necesariamente propicios a intereses personales o de grupos especificos. Por eso, en busca de alternativas más refinadas y especifas, la gentes se han asociado, y desde tiempos remotisimos, para solo mencionar los orígenes greco-latinos de neustra cultura occidental, ya encontramos en nuestro pasado manifestaciones de individuos afiliados con el propósito de atender urgencias de esta naturaleza. Unas veces, son las creencias comunes la base aglutinante. Otras, tal vez derivadas de la confraternidad así nacida, amplían su radio de acción más allá del simple intercambio de ideas compartidas para prestar su apoyo a compañeros menos favorecidos por la suerte, bien para facilitar y compartir medios y recursos, bien sea para atender que los restos de un compañero reciban religiosa y apropiada sepultura, o para socorrer a la familia del difunto. En la antiqua Grecia esas agrupaciones profesionales se denonimaron "*etaipiari*" y, en Roma, se atribuye a Servio Tulio, sexto de sus monarcas (578-534 a. C.), la organización de los "*collegia*"[1] de artesanos en categorías profesionales: de músicos sacros, de artífices o joyeros, carpinteros, tintoreros, zapateros, alfareros y forjadores de cobre. Tito Livio menciona que en 259 a. de C. existía un colegio de mercaderes si bien es bajo el gobierno de César cuando los colegios quedan legaimente sancionados.

El *colegium* o *corpus* debía constituirse por no menos de tres personas físicas, identificadas como *corporari*, origen de nuestras corporacines cuyas bases legales se remontan como vemos a la vetusta jurisprudencia romana. Originalmente se distinguían varias clases de *collequia*: 1) organizaciones públicas o municipales, *civitas*; 2) religiosas, las de las vestales, por ejemplo; 3) de funcionarios públicos, como la de los escribas; 4) comerciales, caso de *fabri, pictores, novicularii* ... En épocas posteriores las leyes de Roma cubrirán los siguientes tipos de corporaciones: las civiles y las religiosas, las seculares y las filantrópicas o caritativas. Para la Edad Media se identifican las corporaciones municipales, eclesiásticas, educativas y caritativas. Mientas el campesino medieval permanece siervo de la gleba, las corporaciones o gremios de artesanos alcanzan mandatos politicos gracias al impulso de las dos primeras profesiones secularizadas, médicos y legistas, muy especialmente de estos últimos, y que, en cierta medida, democratizan los poderes aunque, por otro lado, motivan una incisión social al establecer la rigidida separación de clases entre nobles o patricios (aristocracia) frente a plebeyos, y de burgueses frente a obreros u *operari*[1].

Una de las primeras menciones de colegios con relación a nuestro mundo ibérico aparece en el Código de Teodosio (AD 438) al referirse al colegio de *navicularii* en el que se asociaban los encargados de transportar hacia Roma los productos peninsulares y también documenta la existencia de un colegio de prestamistas. En el Breviario de Aniano se atestigua la existencia de estas organizaciones durante la dominación visigoda aunque en "Liber Iudicorum", promulgado por Recesvinto en 657 como Código de sus dominios y en sus compilaciones posteriores romanceadas por Fernando III el Santo bajo el título de *Fuero Juzqo*, se aboga por la libertad de industria y nos se mencionan restricciones de esa naturaleza. Tal vez esta razón se justifique en la aparición por ese mismo siglo VII de la "*ghilda*" goda en su origen y con un carácter puramente benéfico. La dominación árabe vuelve a fomentar la asociación gremial por oficios y así aparece en cuidades tales como Sevilla, Córdoba y Zaragoza que se conservarán al cristianizarse esos centros después de la Reconquista.

La pimera "huelga" de profesionales hispanos se documenta en nuestro siglo XII cuando los artesanos se levantan contra el abad d Sahagún. Prolijo sería citar todos los documentos relacionados con este tipo de asociaciones gremiales en nuestra cultura, baste mencionar por ejemplo los fueros de Ledesma, de Salamanca, o de Oviedo en los que se establecen derechos de sus asociados. Estos gremios, cofradías y futuras mutualidades atenderán las necesidades de agremiados, proporcionarán asistencia médica, ayuda en metálico o en especia y un reparto equitativo del trabajo. El Ordenamiento de Menestrales sancionado en 1351 por Pedro I, el Cruel, es ejemplo del auge gremial en el siglo XIV gracias al impulso estatal que no olvidará atender al importantísimo Cuerpo Consular. Dignos de mención en el siglo XV también son los esfuerzos de los Reyes Católicos y las ordenanzas y códigos municipales promulgaos en su tiempo para unificar y fortalecer la industria española y que repercutió en el florecimiento de cofradías y gremios. Su nieto, el emperador Carlos V de Alemania y I de España, barrió libertades forales ganadas a pulso en la Cortes españolas que él aboliera, y acabó con las cofradías al derogar (1552) las prerrogativas de libre asociación y las de los municipios. EL primer Borbón, Felipe V, por Cédula Real del 28 de junio de 1907, asesta el último golpe contra los gremios en su papel municipal. Las Cortes de Cádiz por Decreto del 8 de junio de 1813 declaran libertad de industria y eliminan los exámenes y otros requisitos gremiales. A título de curiosidad relacionado con nuestra profesión, tal vez merezca mencionarse el hecho de que en 1539 los libreros valencianos establecen las diferencia entre gremio y colegio.

Partidarios de los gremios alegaron en su favor la protección del trabajador ante la competencia desleal, mientras sus detractores mantienen su oposición por razones antimonopolísticas. En España, Jovellanos en su *Informe sobre el libre ejercicio de las artes* (1785) asentará el golpe final a los gremios, mientras Marx y Engels ya en pleno siglo XIX acusan a los gremios de organización feudal nutrida con mercedes y privilegios a todas luces injustos.

La autocracia de una burguesía capitalista con base en la superioridad de clases y el más altivo desprecio por el trabajador promueve una serie de cambios sustantivos en el siglo XIX. Para esta época, la burguesía considera el trabajo desde un punto de vista puramente económico, es decir, como una mercancía más, fuente de ganancias, y promueve una política económica de "laissez faire" contraria a la agrupación gremial, mientras el trabajador, indefenso, su muere de hambre y necesidades. De la clase oprimida y de idealistas liberales saldrán los líderes de un movimiento reivindicador: el socialismo (1830), cuya prehistoria se remonta a la Revolución Francesa. Entre los defensores más notables tal vez merezca destacarse al francés Pierre Josehp Proudhon quien en 1840, en su acusación *¿Qué es la propiedad?*[2] aboga por los derecho de la propiedad individual y ataca al sistema burgués porque es injusto y explotador. El triunfo de este ideal cristaliza cuando la clase trabajadora se organiza y reunida en Londres (1864) aon el propósito de unir a todos los "trabajadores de la Tierra", funda la International Workingmen's Association, mejor conocida por Primera Internacional. Grupos individuales se juntan en cuerpo mientras en ideales se confrontan encabezados, de un lado, por Proudhon y por Bakunin, del otro, divisiones que causan su disolución en 1874. Fredrick Engels reavivará el movimiento para organizar en Bruselas (1889) la Segunda Internacional, pero ahora los trabajadores estarán representados por partidos políticos. La I Guerra Mundial acaba con esta segunda asociación, renacida otra vez en la Tercera Internacional o Comitern (Moscú 1917) finalmente disuelta en 1943. El andamiaje ideológico de estas asociaciones de trabajadores se basa, sin lugar a dudas, en el pensamiento de Karl Marx (1818-1883) y en sus obras *Manifest der Komministischen Partei* (Londres, 1864) y *Das Kapital: Kritik der politischen Oekonomie (Hamburgo, 1867, primer tomo, los dos restantes aparecieron después du su muerte, publicados por su discipulo F. Engels, entre 1885 y 1894).*

Ya un tanto apaciquadas las tumultuosas corrientes imprescindibles en la reforma social, este siglo XIX marca un hito en la historia de la bibliotecología con el establecimiento de las primeras asociasiones profesionales de carácter nacional y la firme creencia en un posible y único corpus del saber universal a disposición de todo el mundo, universal en composición y uso. En 1876 se funda la American Library Association, en 1877 la británica Library Association, etc., etc.

Al nivel internacional estos ideales profesionales quedan representado por el esfuerzo de los abogados Henri La Fontaine (1854-1943) y Paul Otlet (1868-1944), y cristalizan en la Conférence Bibliographique International, celebrada en Bruselas durante los días del 2 al 4 de septiembre de 1895. Producto de esta reunión es el establecimiento del Institut International de Bibliographie que se encargaría de publicar un Catálogo Universal. Tan ambicioso proyecto estaba condenado a naufragar a penas soltadas las amarras en aguas nada apacibles y menos propicias para la frágil barquilla encargada de llevar a cabo tan larga travesía. Pero no fracasó el interés, ni los ideales se ahogaron. La experiencia abría camino a la cooperación internacional en el campo del control bibliográfico universal. También nos dejó tangibles productos en la Clasificación Decimal Universal, basada en el sistema desarrollado

por Dewey, y en la introducción de una tecnología aportada en nuestro mundo profesional por Otlet con el uso de la micropelícula en las bibliotecas y archivos. Ya en nuestro siglo, a partir de 1913, para ser más precisos, el mencionado Institut cambió su nombre al de Institut International de Documentation (IID) hasta que en 1930 adoptara el que ahora lleva como Fédération International de Documentation (FID). Todavía sin alcanzar el éxito anticipado y las restrigidas actividades de su interés centradas en un sistema preferente de clasificación motivan una progresiva languidez.

Mientras tanto, los intereses y preocupaciones profesionales salieron a todo vapor impulsados por vientos favorables nacidos en el seno del primer congreso internacional de bibliotecarios, la Conference of Librarian reunida en Londres en 1877, el mismo año de la fundación de la Library Association y uno después del establecimiento de la American Library Association (ALA). Asistieron a este memorable acontecimiento representantes belgas, británicos, daneses, estadounidenses, franceses e italianos. La semilla estaba sembrada, la flor se abriría posteriormente en otras reuniones, la de San Luis (1904) y la de Bruselas (1910) cuando se organiza el primer comité internacional que posteriormente sería IFLA. Pero la Gran Guerra detendría su germinación para recoger los frutos después de terminada la contienda. Aquellos primicias se también se manifestaron en el Congrés International de Bibliothècaires et des Amis du Livre (Praga 1926) y en el 50th Anniversary Conference de la American Library Association reunidos en Atlantic City. En esta última ocasión ALA recibiría la encomienda de actuar en calidad de consultor nacional para auscultar el interés local hacia el establecimiento de un organismo internacional que actuara en calidad de Comité Diretivo Permanente Internacional.

Al año siguiente, al cincuenta aniversario de la fundación de la Library Association y en su conferencia anual, nacía en Edinburgo el International Library and Bibliographic Commitee que en 1927 confirmaría en Roma su nueva denominación como International Federation of Library Associations (IFLA). Al estallar la Segunda Guerra Mundial en 1939, cuarenta y dos asociaciones profesionales ya integraban las filas de IFLA y aunque paralizadas sus actividades para afanosa y fielmente reanudarlas con toda pujanza al concluir las hostilidades bélicas y convertirse en la asociación más importante en nuestro medio profesional.

El interés por establecer vínculos profesionales al nivel internacional también se manifiesta en el establecimiento de las siguientes asociaciones: 1930, Inter-American Bibliographical and Library Association; 1938, International Federation of Film Archives; en este mismo año de 1938 cambio su denominación el IntituteInternational de Bibliographie en Fédération International de Documentation (FID); 1942, el Council of National library Associations (CNI A); 1948, se funda el International Council of Archives; en 1953, la Inter-American Association of Agricultural Librarians and Documentalists (AIBDA); en 1955, la International Association of Agricultural Librarians and Documentalists; en 1955, la International Association of Theological Libraries; en ses mismo año, la International Association of Technological University Libraries (IATUL); en 1957, la International Association of Music Libraries; y en 1959, la International Association of Law Libraries.

Presentados estos someros antecedentes históricos, pasemos a examinar la filosofía subyacente en estas asociaciones profesionales en general:

1. Protección y ayuda a sus asociados en caso de necesidad.
2. Establecimiento de normas de conducta en el trabajo, a veces también en aspectos cívicos y morales.
3. Establicimiento de normas en cuanto a pesos, medidas, precios, etc.
4. Control de calidad en la producción.
5. Control de calidad en cuanto al entrenamiento de sus profesionales,
6. Control de interferencias y en el ejercicio de la profesión.
7. Control del mercado, de competencia ilícita o desleal.

También cabe dar crédito, en su contexto histórico, a los gremios en obra de índole cultural al subvencionar producciones teatrales o musicales con las que se diera impulso a la literatura y a las artes, y en obras cívicas tales como levantar puentes o construir hospitales.

El desarrollo de una sociedad capitalista impulsada por la revolución industrial infligirá un escisión de trabajo entre obreros y profesionales como ya vimos. Los primeros encontrarán refugio en la agrupación sindical que, en cierta forma, reemplaza al antiguo gremio, mientras los profesionales se confundirán en colegios y en asociaciones.

El papel de las asociaciones profesionales en nuestro tiempo sigue general las mismas pautas,y podríamos admitir unos pricipios todavía ligados con sus orígenes prácticos en cuanto a promover una ética profesional en el desempeño de servicios; la protección de sus asociados, con mayor o menor éxito según las bases establecidas en la constitución jurídica de cada organismo, especialmente en el caso de aquellos países en los que las colegiaciones son norma profesional; el mejoramiento profesional de sus abonados; y, finalmente, en el establecimiento de normas profesionales. El primer aspecto, el ético, garantiza la responsabilidad del agremiado o asociado para con la sociedad en la que rendirá sus servicios y establece normas de conducta profesional, por ejemplo, el juramento hipocrático supuesto compromiso entre galenos y otros trabajadores de la salud. La protección de asociados puede, a su vez, presentarnos facetas: defensa legal de los derechos colectivos o personales de sus individuos, condiciones de trabajo, de sueldo, o en impulso o sanción de medidas encaminadas a que sólo puedan ejercer una determinada profesión aquellos que reúan condiciones previamente establecias por la asociación, sean colegiados o certificados por ésta. El mejoramiento profesional se manifiesta igualmente en vertientes tales como en programas especializados por medio de conferencias y reuniones, en el fomento de investigaciones relacionadas con la profesión o con áreas afines, a veces dentro del seno de la asociación o a través de esfuerzos cooperativos inter-institucionales, por medio de publicaciones, al proveer actividades de entrenamiento o de mejoramiento profesional, o de programas de educación continuada, también caen en este apartado las exigencias y requisitos propios de una certificación profesional, además y no memos importantes son la mormas establecidas para el entrenamiento y educación profesional junto a la razón de programas de acreditación. El establecimiento de normas abarca sin llugar a dudas, todos los apectos anteriores aunque aquellas, en ocasiones, traspasan el ámbito profesional para proyectarse en disposiciones, reglamentos, leyes, etc. jurídicamente ratificados y sancionados tanto al nivel nacional como al internacional y que afectan de lleno al público necesitado de los servicios profesionales de esos asociados. El impacto social y profesional de una asociación, claro está, varía de actividad en actividad, de asociación en asociación y, sin duda, de país en país. La fuerza vital de la asociación es factor definitivo en la importancia o negligencia en este último aspecto y conste que esa pujanza activa proviene exclusivamente de sus miembros. En otras palabras: son los individuos los que hacen o deshacen las asociaciones y si ellos carecen de energía, el resultado será una organización anémica. Resaltemos, por último, el impacto y repercusión social como profesional de aquellas asociaciones que entre sus normas asumen en adición la responsabilidad de acreditar o no los programas establecidos para entrenar futuros especialistas en su disciplina. Esta medida impone cargas a las asociaciones, pero beneficia al público y a la clase profesional con miras a sentar unos criterios de excelencia, aunque las agencias u organismos ouyos programas serán acreditados se someten a este proceso en forma voluntaria, el costo de tale actividades y los esfuerzos requeridos son exponente de una inversión justificada. En cuanto al programa acreditado, conste que no es la institución la que recibe acreditación, suele conferirse a primer nivel profesional. La asociación acreditadora es responsable de proveer las normas de acreditación, así como los documentos normalizados al efecto. En general, juzgarán: la preparación académica, la producción erudita, la experiencia profesional, lazos continuos con la profesión, competencia en las áreas de especialidad, efectividad docente, interés en experimentación curricular, habilidad para compartir con el cuerpo estudiantil, y servicios rendidos a la comunidad. No quedan fuera otros aspectos relacionados con la carga académica de los profesores, la proporción estudiantes-profesor, la proporción entre profesores que dedican por entero su trabajo a la docencia y los que atienden la enseñanza en jornada parcial, el número de profesores y su diversidad, el bienestar de los profesores con mias a establecer que éstos gozan de iguales establecidas para otros programas institucionales, aunque, a veces, la agencia acreditadora impone condiciones privilegiadas para sus asociados. Por ejemplo este es el caso de profesores en el área de ciencias de la salud, médicos para ser más precisos, o en el de los abogados, por lo menos en el caso estadounidense, al fijarse salarios por encima de escala salarial y jornadas reducidas para los docentes en ambos compos. Por otro lado se exige que a la vez ejerzan práctica profesional. El curriculo también recibe atención especial y se espera sea flexible para atender necesidades individuales, que establezca un balance entre las diversas áreas profesionales, sin mermar importancia a aquellas medulares, que provea mecanismos de evaluación, experimentación y desarrollo, así como investigaciones, y experiencias clínicas. Con respecto a los estudiantes, futuros profesionales, se consideran importantes los requisitos de admisión y retención, y hoy en día se espera queden atendidas las necesidades de minusválidos y que se conceda igualdad de opciones no importa cual sea el origen, raza, religión, idealogia, etc. de los candidatos. El estudiante también queda protegido a fin de que no sea explotado mientras cursa estudios, por importa cual pudiera ser su queja,

discrimen, mal trato, etc. Otra medida importante, corresponde a la evaluación de los recursos informativos o bibliográficos que apoyarán el programa de estudios, así las normas muestran marcado interés en las bibliotecas o en las colecciones tanto en su aspecto cuantitativo como en el cualitativo, y la relevancia justificada en apoyo de investigaciones, lecturas, actualidad de conocimientos, etc. L as asociaciones estadounidenses de farmacéuticos y podiatras exigen además que los bibliotecarios encargados de esas colecciones tengan rango de facultad. Junto a los recursos bibliográficos también se espera unas condiciones físicas adecuadas, aulas, equipo, oficinas, laboratorios, etc. Por último, y no menos importante, tal vez el básico, aplica al apoyo financiero del progrma y al presupuesto adecuado para mantener un el programa dentro de las exigencias naturales de una progesión en particular. Por encima de cualquier otra influencia, consideramos que las dos actividades más importantes de nuestras asociaciones profesionales son el establecimiento de normas y la acreditación de programas pues en última instancia las normas profesionales en sí representan el criterio colectivo de la asociación en cuanto a lo que debe ser la preparación académica de sus miembros. No en balde el interés despertado últimamente por este proceso, especialmente en los Estados Unidos.

Al haberse perdido o posiblemente debido a una falta de conciencia profesional colectiva basada en la tradición que apoya la experiencia en otras vocaciones y a un entrenamiento superficial en lo que atañe a su función social y a sus responsabilidades, nos parece justo indicar que en nuestro mundo latino del momento todavía no se han alcanzado los niveles de conciencia propios de una profesión acreditada como tal en lo que a bibliotecología concierne.

Mientras nuestra sociedad actual prosique avances en todas las áreas del conocimiento y produce más y más información relecionada con recursos capaces de resolver problemas que aquejan a los menos favorecidos, nos encontramos ante una situación de emergencia con miras hacia un control bibliográfico eficiente y a una difusión y transferencia de información justa que exigen de todos aquellos interesados en la tradicional bibliotecología o en las novedosas ciencias de la información un plan inmediato de acción encaminada para resolver las limitaciones presentes de quienes viven en un ámbito precarios como el de nuestra América Latina y que en el contexto universal nos conciernen a todos. Cabe preguntarse: ¿qué es lo que nos falta para alcanzar un nivel más alto de desarrollo, cuando en realidad tenemos materias primas y recursos humanos? La clave está en que lo que nos hace falta es simplemente información. Pero una información debidamente actualizada y canalizada para cada secor social y para cada individuo en especial. La diferencia entre los de arriba y los de abajo es información o su ausencia. Esta razón es la justa causa de que busquemos alternativas en el apoyo mutuo por medio de la asociación con grupos similares es decir, con las asociaciones profesionales, para que nuestros esfurerzos se consoliden y alcancen efectividad que de otra forma no tendrían nuestras luchas locales. Esta razón es la justa causa de que una organización internacional como IFLA se preocupe y trate de apoyar los tentativos esfuerzos del exiguo racimo de profesionales latinoamericanos comprometidos en la ardua y retadora tarea de elevar la práctica técnica al nivel de una profesión reconocida.

Es preciso disipar las aprensiones con un mejor conocimiento de las instituciones que en apariencia nos amenazan con su gigantismo en una lejanía que se nos antoja completamente extranjera. Al considerar nuestras asociaciones profesionales justo es que examinemos aquella que puede servirnos de modelo gracias a sus logros e influencias, partiendo de las circunstancias del nacimiento de IFLA, por ejemplo, su actual constitución, sus normas y sus metas. Y, por qué no, también es conveniente canocer los beneficios y ventajas, si existen, que puedan derivarse de esta organización.

Gracias al interés, al esfuerzo, a la dedicación de las personas con ella asociadas por recuperar el tiempo perdido y reconstruir un mundo en ruinas por medio de la cooperación internacional, IFLA ha podido triunfar al servir de foro en el intercambio de ideas y experiencias, mientras en su médula predomina el interés por asimilar las tareas comunes a las responsabilidades de la bibliotecología y de la información en una escala internacional.

Algunos de los resultados tangibles de los que hoy disfrutamos gracias a los esfuerzos de IFLA son, por ejemplo:

El acuerdo internacional para préstamos interbibliotecarios (1954);

Las normas internacionales para bibliotecas públicas (1958);

El simposio sobre bibliotecas nacionales (1958);

La Conferencia Internacional sobre Principios de Catalogación (1961)

La International Bibliographic Description (1974).

Esta última contribución podría calificarse de terremoto o mejor huracán, más caribeño, que ha sacudido la bibliotecología moderna culminada en lo que hoy conocemos como las *Anglo American Cataloguing Rules 2.*

Definitivamente, las normas que han de regir neustro mundo moderno se gestan en el seno de IFLA y ningún grupo cultural puede ya eludir su participación en la toma de unas decisiones que acabarán por afectarnos a todos. En cartera permanecen otros no menos importantes compromisos mundiales:

1. Impulsar el Control Bibliográfico Universal (UBC).
2. Colaborar con UNISIST (World Science Information System) y otras agencias en el establecimiento de varias recomendaciones en las áreas de normalización de sistemas mecanizados (UNIMARC), intercambio de publicaciones, etc.
3. Promover normalización en catalogación por medio de su Secretaría Permanente que sirve de centro coordinador y para cuyo fin publica un boletín trimestral bajo el título de *International Cataloguing.*
4. Fomentar el préstamo e intercambio internacional por medio de seminarios.
5. Asesorar y apoyar a los países en vías de desarrollo al servir de foro a los problemas locales por medio de sus secciones y comités.
6. Cooperar con la FID en áreas de interés común, tales como: educación, entrenamiento, países en vías de desarrollo, UNISIST, investigación, terminología, y normalización.
7. Fomentar la normalización y legislación en el campo de las bibliotecas públicas.
8. Intensificar y estabilizar las relaciones con otras organizaciones internacionales en el capo de la bibliotecología.
9. Desarrollar una política activa de publicaciones.

La barreras que pretende deribar son en cierta medida:

1. Una falta de compatibilidad, de normalización y de motivación.
2. Fallo en el proceso de comunicaciones efectivas.
3. Escasez de fondos económicos.

* * * *

bibliotecología y de informaática en gran múmero países.

6. Comprensión errónea o inadecuada en lo que concierne a factores operantes en diversos países con relación a sus circunstancias históricas, sociales, económicas y políticas.
7. Diferencias lingüísticas.
8. Diferencias e idiosincrasias de factura nacionalista.
9. Escasez de recursos.

Durante los días del 13 al 16 de noviembre de 1974, en la capital de Estados Unidos, se reunía organizado por IFLA, con subvención económica de UNESCO y la participación Association of Research Libraries, de la Library of Congress de Washington, el Primer Seminario para Bibliotecarios Latinoamericanos en el que participaron invitados de Argentina, Brasil, Colombia, Costa Rica, Curaçao, Ecuador, México, Panamá, Paraguay, Puerto Rico, Venezuela, los representantes de la OEA, UNESCO, Library of Congress, y la Secretaria General de IFLA, Margaret Winjnstroom. Recordamos el evento para cerrar con las palabras pronunciadas en esta ocasión por la Sra. Wijnstroom al decirnos que la participación en IFLA de los bibliotecarios de todas las regiones del mundo es vital para el desarrollo de un sistema de control bibliográfico universal (UBC) y que la asociación por ella representada está dispuesta a ayudar a los bibliotecarios y documentalistas de América Latina en sus esfuerzos para planear, crear y desarrollar un sistema de bibliotecas y de información, pero una organización no puede ser nada más que la suma de sus partes y sin participantes no puede funcionar IFLA, ni ninguna asociación profesional, añadimos nosotros.

NOTAS

1 Aquellas agrupaciones en épocas de la antigua Roma se denominaban colectivamente "collegia", plural de "collegium". En nuestra lengua española el término ya aparece registrado por Nebrija en 1492 como cultismo y con valor "aiuntamiento" o como "conjunto de colegas, asociación" El término queda documentado en el *Lexicom ex Sermone Latino in Hispaniensee* (Salamanca, 1492), según cita de J. Corominas, *Diccionario Crítico Etimológico de la Lengua Castellana* (Madrid : Gredos, 1977), tomo 1, pág. 851. En su evolución pasará de una filiación ideológica no exenta de tonos religiosos a convertirse eventual y paulatinamente en gremial, artesanal, laboral o profesional. Este proceso evolutivo seguirá dos vertientes: la primera heredera de aquella será una confraternidad, mientras la segunda adquiere un carácter secular al desarrollar derechos y privilegios que finalmente alcanzarán poderes públicos

basados en las prerrogativas económicas propias de corporaciones municipales. Y así nacerán hermandades, por un lado, y gremios, asociaciones, colegios profesionales, ligas, federaciones y, también, los sindicatos de nuestro tiempo. Originalmente y en la Edad Media, el gremio (del latín *gremium*, curiosamente en nuestro idioma tuvo en otro tiempo el significado de "regazo"), y en ese regazo se acogían un grupo de comerciantes y artesanos legalmente constituidos bajo el amparo de unas bases religiosas, cristianas para ser más precisos. Su definición todavía responde al concepto profesional que nos ocupa hoy, según dice la Academia:

2. Unión de fieles con legítimos pastores, y especialmente con el IPontífice Romano. //3. En las universidades, el cuerpo de doctores y catedráticos. //4. Corporación formada por los maestros, oficiales y aprendices de una misma profesión u oficio, regida por odenanzas o estatutos esp. // 5. Conjunto de personas que tienen un mismo ejercitio professión o estado social. (Vol. I, pág. 701a. – EN *Diccionario de la Lengua Española* /Real Academia Española. – 20ª ed. – Madrid: Espasa-Calpe, 1984).

Sorprendente el cambio semántico experimentado con el transcurso del tiempo y causa de que en algunas gentes se horrorizan ante una posible colegiación de bibliotecarios, mientras en otras, dentro de una corriente tradicional en nuestro mundo latino aceptan con la mayor naturalidad tal concepto. Un colegio de bibliotecarios sigue la norma de nuestra cultura latina al respecto y cimentada en el principio de apoyar y fomentar los intereses de grupos profesionales según los modelos de un colegio de médicos, de abogados, de ingenieros, etc.

2 *Operari*da origen a nuestro "obrero", a su vez derivado de *OBRAR*, del latín *operari* "trabajar". Esta forma a su vez proviene de *opus, -eris* (trabajo, obra). La primera documentación en español aparece en el Poema del Cid (siglo XII) bajo su forma "huebra": unos Çapatos que a gran huebra son". La tradición hispana bajo esta misma acepción de "cantidad de trabajo realizado en un día", es la utilizada por el gaditano Lucio Junio Moderato Columela (siglo I de nuestra era) en la obra *De re rustica* (II, IV, 8) : jugerum talis agri quattor *operis* expeditur". Con este mismo significado la define Nebrija (siglo XV). Cita de J. Corominas, *Diccionario Crítico Etimológico de la Lengua Castellana* (Madrid : Gredos, 1977, tomo III, págs. 541-542.

Interesante destacar que igualmente se utilizaba en derecho indiano para el trabajo del indio encomendado.

3 La memoria *Qu'est-ce que la proprieté : recherches sur le principe du droit et du guovernement* fue presentada ante la Academia de Besançon y en ella su autor afirma la filosofía expresada en 1780 por Brissot de que "la propiedad es un robo".

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Library Development Worldwide: The Role of the British Council

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ABSTRACT

The British Council has been involved in assistance to library development worldwide almost since its beginnings in 1934. The article describes the four main phases of this assistance, in the context of the development of its own library, bibliographic and information services and as part of the British Government's aid programmes.

The emphasis has primarily been on national public library systems, based on the concept of financial, legislative and moral commitment by host governments complementing the aid input.

When the British Council for Relations with Other Countries was founded in 1934, Britain already possessed a considerable library system. The national library had been established through the 1753 British Museum Act, public libraries owed their origin to Acts of 1850 and 1919, the Library Association had been founded in 1870 and ASLIB in 1924. University College within the University of London had established the country's first library school in 1919, the National Central Library had been set up in 1916, co-operative schemes had begun to flourish and the British publishing and bookselling industries were strong and effective.

It should perhaps not be surprising therefore that an organization such as the British Council, whose 1940 Royal Charter of Incorporation defined its objectives as "promoting a wider knowledge of our United Kingdom of Great Britain and Northern Ireland and the English language abroad and developing closer cultural relations between our United Kingdom ... and other countries for the purpose of benefiting the British Commonwealth of Nations" should have had as one of its main activities the 'promotion of the printed word'; promotion in its widest sense in terms of book presentations, the creation of its own libraries and assistance to the development of libraries in other countries, the provision of bibliographic support for the selection of materials, its own publishing programme, the administration of a scheme of low-priced editions of textbooks for students and measures such as exhibitions and the provision of information to the publishing and bookselling trades in order to make British books more widely available overseas through commercial channels.

Not all of these activities date from the Council's inception. Nor, as will be seen, has their importance remained steadfast, either to the Council or its sponsors. The Council's official history by Lady Donaldson[1] pays scant attention to libraries and books but fortunately that is to be remedied very shortly by the publication of a book on the history of the Council's libraries and its contribution to library development 'Spreading the Word' by Dr. Douglas Coombs[2], who was Controller of the Council's Books Division from 1980-84.

Over the past 40 years in particular the Council, as Dr Coombs and earlier commentators have indicated, has experienced a very close interweaving of the development and maintenance of its own libraries with those in the countries in which it has operated. This is due in part at least to its relationship with its sponsors (the Foreign Office, the Colonial Office and the Commonwealth Relations Office in the early days and today the Foreign and Commowealth Office and its aid component, the Overseas Development Administration) and their perception, as well as the Council's, of the relative value of books, libraries and information whether in terms of aid to educational and other development or the promotion of British thought and achievement.

In its definition of 'The Main Tasks'[3] on the occasion of its 25th anniversary in 1959 the Council acknowledged in its printed word activities its partnership with other British agencies, including British

book and periodical publishers and the Central Office of Information. It might also – and perhaps should – have included in its partnership survey overseas governments and other non-British (aid) agencies for it is this partnership role, and its relative strength and weakness, with other agencies, both British and non-British, which has been crucial over the years to the Council's library development activity.

It is also equally true, as Roy Flood, then Director of Libraries Department, pointed out in a paper given at the Library Association's 1978 conference, that the Council's "involvement grew out of response to needs and opportunities rather than (having been) a planned policy from the beginning. The policy appeared at a later stage and amounted to an acceptance that what the Council was doing was essential and effective and it was the organization best equipped to do it"[4].

The early years

Writing in 1951[5], John Barnicot, one of Roy Flood's predecessors, acknowledged that the need for presentations to other libraries was inherent in the 1935 agreement with the Publishers Association, which allowed the Council full trade terms on its book purchases. It was not, however, until the early 1940s that the presentation of books to institutional libraries, Anglophil societies and Council-controlled institutes came to be supplemented and superceded by a very active involvement in the development of public libraries in the colonial territories of the West Indies and West Africa. In both areas the partnership and responsive role was evident in the way in which the Council built upon earlier work undertaken under the auspices of the Carnegie Corporation and the Ford Foundation.

But this was not to be piecemeal assistance. As Sir Ronald Adam, the Council's Chairman and the then President of the Library Association, pointed out in June 1949: "The Council took the attitude that to plan only for individual centres would be shortsighted in the extreme and that, wherever possible, a coordinating scheme must be the background of all library planning. In other words, the library basis must be the region and not isolated points"[6].

Following a ruling by the Colonial Office that the Council in the West Indies should concentrate on public library services, in January 1945 the Council was able to take over the Central Library Scheme based in Trinidad, which evolved into the Eastern Caribbean Regional Library Scheme. The intention had been that participating countries should contribute local costs for the development of free public libraries, whilst the British Council grant should provide books, training and professional advice but formal government commitment within the region was not forthcoming and the scheme gradually faded out during the 1960s.

In Jamaica the policy of 'matching commitment' was much more successful. In 1944 Hugh Paget, the Council's Representative, had invited Nora Bateson to draw up a plan for the development of a library service and this formed the basis of the Jamaica Regional Library Service. Legislation was enacted, a Library Board was established and the Council agreed to "contribute £70,000 over 10 years ... on condition that the Jamaica Government contributed £100,000 over the same period"[7]. No reference to the Council's work in the Caribbean would be complete without paying tribute to the work of Sidney Hockey, who spent some 10 years in the region, with both ECRLS and JLS. He is one of the band of Council librarians whose individual contributions to library development have been much appreciated over the years around the globe.

In West Afica by contrast the story is one, at this stage, not so much of the creation of national library services but rather the emphasis on the need for training and the transformation of the Council's own libraries into public libraries, usually conditional however on matching inputs from the local authorities. The parallel success story to Jamaica's was that of the Gold Coast, pioneered by Evelyn (Eve) Evans, who was recruited by the Council in December 1945 and who was to become the first Director of the Gold Coast Library Board in 1950.

Eve Evans has herself written a book about the development of libraries in Ghana, 'A tropical library service'[8]. As with Jamaica, the library scheme she drew up during her five years with the Council envisaged legislation, the establishment of a board and appropriate financial inputs for a countrywide library service. As Stephen Parker (himself a former Council librarian and Director of the Botswana National Library Service) has written:

"The successful establishment and development of the Gold Coast Library Board proved beyond doubt that given the right combination of official support, outside aid and encouragement and professional supervision, the development of a viable national library service in a developing country was perfectly feasible.

It provided a working example of a nationally organized service, established on a firm legislative basis and with centralised policy making and administration ... The service acted in varying degrees, as a model for the subsequent development of similar national library services in (East and Southern Africa)"[9].

This early involvement by the Council in the development of public libraries in these two regions was however to be short lived. On 9 August 1948 the Colonial Office issued a *Definition Document* which stated that "it is not a function of the Council to establish or maintain general public libraries in the Colonies". Existing commitments were "to be transferred to other authorities as speedily as circumstances permit in each case" and assistance was to be limited to making presentations and, "for the time being at any rate, in helping to train local staff and in lending staff temporarily to organize library services"[10].

So ended one very distinct phase of the Council's work in library development and one which, as will be seen, set tone for future activity. The emphasis was on public libraries, developing library systems modelled along British lines as part of Britain's overall assistance to the colonies, but based very firmly on identified needs in individual countries. Whilst there was to be some marginal activity in th 1950s, for example the Council continued to be responsible for the Eastern Caribbean Regional Library until March 1953, it was not until the end of the decade that it would once again be in a position to materially assist in the creation and expansion of library services other than its own.

A period of expansion

On 22 June 1959 the British Government announced certain measures to "increase the flow of British books and periodicals abroad". Of these, two were of specific interest in terms of library development, namely:

"to promote the production of low-priced books for sale in certain countries where there is a large unsatisfied demand for such books;

"to assist, through the British Council, in the development of library systems in a number of colonial territories, including the establishment of central libraries, regional branches, book vans and book boxes"[11].

The motive therefore was not entirely one of altruism but the proposals were responsible for the creation of the English language Book Society which continues, 30 years on, to provide textbook for students and libraries in developing countries at between one third and one half of the cost of the original editions, and for the continuation in East and Central, as well as West Africa of assistance to the development of national public library services. As a Council report of a few years later read:

"This was a welcome chance for the Council to apply itself once more to work of a kind which ... it had initiated with some success ... No term was set to this new scheme; and the conditions were sufficiently wide to permit the Council to consider a variety of projects ... in the six years of operation to date assistance has been given to 22 schemes in nine countries"[12].

The emphasis was to remain on services having a central policy and administrative direction. "In the developing countries of the Commonwealth the way forward appears to lie in the pooling of resources in a national system ... centrally based, and with regional branches developing in due course; professionally staffed; with a regular fund for new books; known as providing reliable and resourceful centres of information and documentation; with plenty of space for readers; and generally incorporating a service to schools."[13]

But progress was not always easy. There were suggestions of neo-colonialism in trying to run 'British style' libraries in developing countries, libraries were having to compete for attention in governments' eyes with other aspects of development and the limited funds at the Council's disposal, some £80,000 annually, had to finance capital and not recurrent expenditure. Nevertheless, through the work of Council librarians such as John Schofield and Sidney Hockey, who were posted to Nigeria and Kenya respectively as library advisers in the early 60s, the Council helped to establish through its Public Library Development Scheme over the next 12 years national public library services in Kenya, Tanzania, Uganda, Sierra Leone, Malawi, Botswana and Swaziland and to expand services in Nigeria. Outside of Africa assistance was provided for the first public library in the Soloman Islands and the first free public library service in Fiji.

Parallel to this activity the Council was developing its own libraries around the world which were often seen as surrogate public or academic libraries, where local resources were limited. This was happening too in those countries in which the Council was assisting in the development of local services, and following the issue of a directive from headquarters, once again, in Ghana, Gambia and Uganda, Council libraries were handed over to the local authorities. Council libraries have, over the years, opened and closed, depending on the state of local library services, but in many countries they have played and continue to play an exemplary role, as models of good library practice with, open, access to a very wide range of books,

periodicals, audio visual materials and, now, computer software.

It is estimated that some £½ million was spent during the period 1959-69 on library development, the funding being made available to the Council from the Commonwealth Relations Office and the Colonial Office. This was to change however by the end of the decade when responsibility for library development passed to the Ministry of Overseas Development (ODM), ending the second major phased of the Council's library development role, which had taken place during the period which saw the emergence of independence for many of Britain's colonies. Libraries were recognized as being of importance within education and for development and it is a tribute not simply to the British Council but to the individuals who were responsible for shaping library services at that time that so many of them continue to function and indeed flourish.

The 1970s

Since 1971 and the annoucement of the British Government's 'Expanded Programme of Books Aid' the Council's role has been chiefly one of administrator and agent as the primary funds at its disposal have been aid funds, over which nevertheless the Council has had considerable control.

The new programme arose from the recommendations of a joint ODM/British Council/FCO working party on books, periodicals and libraries which recognized, in the words of a former ODM Education Adviser, that "the provision of books is an economic, convenient, effective and much [illegible]ted form of aid, as books are an essential took of developme[illegible]e new Books Aid Policy expanded the Low Priced Books Scheme, and in 1973 transferred its administration from the Central Office of Information to the Council; created the Books Presentation Programme (BPP), to provide for the presentation of books to the libraries of educational institutions; doubled the funding available to the Public Library Development Scheme and formally established three Public Library Development Officer (PLDO) posts, to be filled by Council librarians to research likely projects and administer the scheme.

Here at last was the recognition of the growing importance of libraries to the academic world and to educational development in general in developing countries which perhaps had hitherto been neglected. The emphasis however was still to be on public libraries in Commonwealth Africa: the PLDO posts were created in Swaziland (as Director of the Swaziland National Library Service (SNLS), in Zambia and in Nigeria with a remit to advise London on public library development programmes in East and Central Africa, and Nigeria and West Africa respectively, and to implement projects, which included at this stage mobile libraries, extensions to buildings and presentations of books and equipment. It is interesting to note that, since the end of 1986, ODA has been supporting the SNLS againg in terms of a supplementaion for the Director's post.

Over the next few years it became clear to the Council and to ODM that the two schemes, BPP and PLDS, were not entirely complementary. At the same time Britain's aid policy changed: in 1975 a White Paper announced that the new aid emphasis was to be 'More help for the poorest'. In the field of books and libraries this was not to be easy to implement for the Council's traditional role had assumed an elite, English-reading public. Initially however the changes were not dramatic, and by 1976 PLDS had become the Library Development Scheme (LDS), with funds made available to developing countries outside of Commonwealth Africa, and the BPP was extended to include presentations to public libraries, which had formerly been excluded.

Although the major project at this time was the development of the Lesotho National Library Service, to which the Swaziland LDO post had been transferred, the Council was finally able to call on official British aid to fund a variety of smaller projects around the world, from Afghanistan to Zambia and, after an absence of some 30 years, it was once more able to fund library development projects in the Caribbean. There were to be more mobile libraries, presentations of books and, under a pilot scheme, audio-visual materials, but predominantly funds were provided for short-term local or regional training in librarianship.

It would be incorrect to suggest that, until this point, the need for professional training had not figured prominently in the Council's list of priorities, for the Council had been involved from the very start in a number of training schemes, in which it had often co-operated with the Library Association, and had consistently encouraged counterpart training in Britian. In 1943 it had assisted Helen Stewart to run a regional training course in the Caribbean and in 1944 it had established the Achimota Training School near Accra (destined only to run for a year). Following representations by Sidney Hockey in the 1960s multilateral funding enabled the East African School of Librarianship to be founded at Makerere in Uganda and it was the Council in Lesotho which in 1976 invited Ronald Benge to undertake an advisory visit to that region, which resulted in recommendations leading to the creation of the certificate course at the Swaziland College of Technology and later at the diploma and certificate courses at the University College of Botswana.

But now it was able to spread its net much wider. Long-term training in Britain could be provided under ODM's technical assistance (later technical cooperation) training programme, and many countries have continued to benefit under these provisions, with some 60 students in Britain under TCTP auspices studying librarianship and information science in 1986/87. But LDS funds were able to provide lecturers for the University of the West Indies and for the University of Jordan and for the UNESCO regional training project at the University of the Philippines. There were short courses for medical librarians in Bangladesh and for agricultural information workers in Thailand and the Philippines, and cooperation with the German Foundation for International Development (DSE) for the training of East African information specialists. Much of the training was geared to the needs of those libraries which, on developmental grounds, were eligible to receive presentations under the BPP, but whose staff needed professional updating, and this training continues to be given although it is now funded from the BPP itself.

By 1978/79, when the BPP stood at £1.2 million and LDS at £500,000, ODM was considering whether books aid programmes should be further expanded. The Council had been encouraging ODM to consider assistance to rural libraries, including the presentation of indigenous material, within the context of the new aid policy and the increasing emphasis being given by UNESCO and others to integrated national library systems, and early in 1979 a joint ODM/BC working party was set up to consider the question of assistance to the publishing and production of indigenous materials. By the end of that year however there were to be cuts in aid funds which, despite protestations by the Council, resulted in the phasing out of Library Development Scheme in 1980.

This brought to an end what might be considered the third phase of the Council's library development work which had seen a growth in the number of smaller projects, in response to locally expressed needs over a much wider geographical area and in line with the indigenous expansion of library services. Aid funds, through bilateral technical cooperation programmes, were still to be available – for training, for the recruitment of experts, for the supply of library equipment – but by this act Britain had withdrawn from the library development arena, in as much as there was to be no funding focus for such work, and its withdrawal for UNESCO in January 1986 has similarly meant a reduction in the extent to which British expertise can be channelled overseas.

But it is not in the Council's nature to remain inactive in this field since the printed word, as defined at the beginning of this paper, remains a core activity. It continues to administer the BPP and has seen a rapid expansion of the programme since the Overseas Development Administration, the successor to ODM, agreed that funds should be voted from bilateral technical cooperation programmes, and that the Programme should be flexible enough to accommodate training courses and the provision of small items of stationery and equipment.

Through the contact its own libraries and librarians have with the library and information profession in the 82 countries in which it operates it has been able to encourage professional dialogue between British and local practitioners to the mutual benefit of all concerned: academic links have been forged between departments of library and information studies in Britain and in Peru, Indonesia, Mexico, Pakistan, Turkey and Morocco, a manpower survey has been undertaken in Botswana and the Council's programme of professional courses in Britain has recently included medical librarianship, information technology in libraries and conservation.

Council libraries, as has been mentioned earlier, continue to play a part in local library networks, and currently proposals are being formulated to re-open the libraries in Nigeria. There is close cooperation between the Council and those non-governmental bodies also engaged in library development activity, namely Voluntary Service Overseas (which currently has some 23 librarians serving in 11 countries) and the Ranfurly Library Service, which over the past 33 years has been responsible for donating some 12 1/2 million new and second hand books to needy institutions overseas.

Nor should the Council's role in the provision of bibliographic information be overlooked. British Book News was first produced in 1940 and continued as a highly respected review journal until the beginning of this year. But since April it has been transformed into a monthly survey of new and forthcoming books which is distributed free to some 7,000 book buying institutions in developing countries.

With the advent of technologies which would seem to render the printed word obsolete there is a danger that libraries may be regarded as old fashioned and information a tradeable commodity, only available to those nations able to pay for its electronic transmission.

Aid agencies continue to plough their own furrow and developing countries are increasingly unable to coordinate the various, tied, funds put at their disposal. As a recent publication puts it "some of this report's hardest words are reserved for aid coordination, where it finds donors and recipients sadly wanting, though making belated efforts to improve". 15.

It is all the more essential therefore for organizations which are in a position to provide financial, administrative and logistic support to work in partnership – with each other and with the library and information profession worldwide – if the value of libraries and information are to be recognized as a potent factor in general economic development.

For its part the Council is currently involved in the formulation of a major paper on issues in library development which is to be discussed with the International Lending Agencies and which will attempt to identify criteria for the economic justification for the evaluation of library services and it has been the driving force, along with the Publishers Association, for the establishment of a consortium of British interests which will be in a position to respond to major International Lending Agency library development initiatives.

These are however fairly long-term plans and in the meantime considerable emphasis is being placed on cooperation with other bodies. The Council has made a significant financial contribution to this year's official pre-conference seminar 'The International Colloquium on the harmonisation of education and training programmes for library, information and archival personnel' to be held in London and many Council Representatives will be supporting attendance at the Brighton IFLA Conference. Recently the Council was able to contribute to a FID seminar on optical disk technology held in Britain and discussions continue with IDRC, with UNESCO, with DSE on ways in which cooperation can be achieved.

Libraries and information remain for the Council and inherent part of its own function and of significant value within the development process. Over the years it has assisted the process of library development in many different countries and in many different ways. It has been accused of offering library development with both "cultural and material strings attached" although "the relative looseness of the strings" is acknowledged 16. It has endeavoured to share the British experience. It is for others to judge whether the time, effort and funds expended by the Council over the years have proved their worth.

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IFLA GENERAL CONFERENCE, BRIGHTON

Division: REGIONAL ACTIVITIES

Section: Africa

1987

142-AFRICA-2-E

Library and information services in a changing world: an African point of view.

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"in many (African) countries collapsing economies have severely curtailed the flow of books both from local presses and elsewhere."[1]

INTRODUCTION

This discussion must start with a caveat namely that, because of the vastness and complexity of the African continent, it is difficult to generalize even if the subject of discussion is a subject as esoteric as the state of its library and information services. To make the task manageable, therefore, our purview will be limited to the area usually referred to as Africa South of the Sahara, thus excluding Arab North Africa and the Republic of South Africa. We are thus referring to those countries in West, Central, East and Southern Africa, mostly former colonies most of which achieved their independence in the 1960s. Even then these thirty or so countries still feature significant social political and economic disparities which make generalizations about them difficult. Nevertheless they share certain broad similarities in their recent histories of colonial subjugation and post-colonial experience in the political, social and economic spheres. It is these similarities which inform the African perspective of this paper.

THE GLOBAL CONTEXT

Library and information services in the developed world are, without doubt at the threshold of momentous changes which are destined to affect in a fundamental way their underlying philosophy and the nature of their services hitherto. This is due, above all else to the impact of the recent significant advances in the fields of telecommunications and computerization which they have increasingly adopted. Through the use of communication sattelites, libraries and information centres are now able to link people and resources separated by vast distances. Similarly the introduction of the computer and its peripheral devices as well as new data

transmission techniques (laser technology, optical and video disc technology etc.), have multiplied by several fold the ability of library and information services to store, process and retrieve data and information while at the same time drastically reducing the time for carrying out such procedures.[2] Assessments of the impact of this new technology on the library environment, on the place of library and information services in society and on the preservation of library materials are varied, particularly in their detailed scenarios.[3,4,5,] But whether such assessments subscribe to the ultimate vision of a paperless society or not, and whether they conceive the prospects of such changes as information "Armagedon" or as "information paradise"[6], they are agreed about the fundamental way it will affect existing realities. Thus whether the libraries of the future are "paperless" or not, a variety of new electronic techniques are now being used for packaging and transmitting information and these are likely to increase in the future. This development will in turn affect society's attitude to information and its use, the nature and scope of library and information services and the credentials of those providing the services. This is not the subject of this paper, but it is important to keep it as an important backdrop in the following discussion of the African situation since, as will be argued, African libraries and information services are historically linked to and dependent on the information resources of the developed world in very critical ways.

THE AFRICAN CONTEXT

Library and information services are social institutions and in the African context, modern library and information services are historically part of the colonial heritage, usually the by-products of modern education (particularly higher education) and social, technical and scientific research and the demands of modern bureaucracies.

The expectations were high. In the context of new nations such as those in Africa, the importance of library and information services are seen to derive from the crucial role of information and communication in the modernizing process. Libraries, it is generally held, have a tremendous potential for advancing the pace of development. They are the storehouses of humanistic, scientific and technological knowledge and the repository of the wisdom of generations and civilizations. Besides, in their information role, they are said to be dynamic agencies for actively communicating and transmitting knowledge and by so doing fostering the creation of new ideas and advancing the process of innovation. Furthermore, drawing from the experience of the United States of America, public libraries were expected to play a significant role in formal and informal education: to serve as the "people's university" where ordinary people may, without cost, obtain such information and knowledge as they require for life-long education or the acquisition of new skills and qualifications.

Accordingly, during the 1950s and 1960s considerable resources were devoted to building university libraries of the highest standing in Abidjan, Accra, Addis Ababa, Dakar, Dar es Salaam, Kampala, Kinshasa, Lusaka, Zomba,. Ibadan, Ife, Lagos, Nsukka and Zaria. Research and special libraries, though not always large or well-funded, also developed to serve the specific needs of government departments and research institutions, particularly in agricultural, medical and scientific fields. A number of countries also set up National Libraries as apex institutions charged with the task of collecting and documenting the national bibliographic output. Finally most, if not all the countries under consideration established public libraries, some in earlier days, equipped with bookmobiles to stretch their services beyond the few urban centres where they were invariably located.

It is important to note that the philosophy which informed this transplantation of the library and information services in Africa have been those taught in the library schools in Europe and America where the bulk of the practicing library personnel were trained. The same philosophy continues in large measure to permeate the curricula of the library schools which have since been established in a number of African countries.

THE CURRENT STATE

A critical look at the current state of library and information services in Africa would however show that much of the optimism of the 1960s has given way to serious doubt and the impressive growth of the earlier times has been replaced by stagnation and, in many cases, decay.

At the root of this unfolding crisis is Africa's severe economic recession and the debt problem. By the 1970s a combination of faulty economic policies and a hostile international economic environment resulted in poor performance in many African countries.[7] Thus during the 1980-84 Africa experienced a 22.9% decline in the volume of its exports and since these countries are dependent on foreign exchange earnings for their import, there has been a corresponding decline in imports. This decline in imports has been further aggravated by the stringent adjustment programmes by a growing number of African countries. One feature of these adjustment programmes is currency devaluation which makes imports very expensive. As a result, very often, scarce foreign exchange is reserved for only certain categories of imports which are considered to be either essential or revenue-generating. Virtually every African country is now suffering from the effect of severe foreign exchange shortages and are unable to import enough goods to keep the economy running efficiently, much less develop it. "The standard of living of Africa's peoples, and the national economies of virtually all African countries have deteriorated badly during 1980s".[8] This dismal economic situation has had a particularly

deleterious effect on library and information services which as we shall see need foreign exchange for the importation of practically all its resources from abroad, are not income generating and rely entirely on critically short public funding.

However, although the economic situation is the predisposing cause of the present crisis in library and information services in Africa, other more fundamental reasons are to be found in the way the services have "developed" over the years and their relations to their internal and external environments.

In the first place library development in Africa appears to have proceeded on the basis of assumptions derived from Europe and America without enough effort at adapting them properly to the African situation. Whereas it could be argued that this is justified in the areas of academic and research library and information services, such assumptions are questionable in the vital area of public libraries whose potential clientele differs so radically from the American and European prototypes. The vast majority of this potential clientele live in rural areas and are illiterate. The information and knowledge needs of this section of the population have been largely ignored by the prevailing book-centred philosophy of "public" libraries. Furthermore they have not been able to serve in the much needed and challenging role as agents for mass mobilisation. This has led some critics to question the relevance of public libraries to the needs of the overwhelming proportion of the population they exist to serve. In the words of Adolphus Amadi, "it is patently sad that American libraries exist to meet the needs of Americans, British libraries exist for the British, while African libraries, because they are both American and British have neither an African clientele nor services".[9] In an emerging social climate which favours rural development and rural mobilization, public libraries are thus becoming vulnerable and unless they

can identify themselves with the new societal goals and objectives they are unlikely to be allocated a share of the nation's resources adequate for their needs. The result will be the continued underdevelopment of libraries as a whole and public libraries in particular as social institutions.

Secondly, library and information resources in Africa in the decades since the first modern libraries were established are meagre and grossly inadequate both in terms of aggregate resources and their spatial distribution. Although statistics are far from being comprehensive and are thus inconclusive, what there is confirms this conclusion. It is estimated, for instance, that in 1979 the resources of some 632 libraries in the entire African continent with the exception South Africa was less than 10 million volumes or an average of 15,000 volumes per library.[10] By way of international comparisons, in 1977-79, 83,578 libraries in the U.S.A. had 1,511.7m. volumes while in the U.K. a total of 161 National and Public libraries only in 1980 had 145.9m volumes.[11] To give some idea of national collections in 1979, the aggregate book resources in Ghanaian libraries were estimated at 1m. volumes while those of Nigeria were 1.25m. Tanzanian and Zambian libraries had under ½m volumes each.[12] Added to this inadequacy of aggregate holdings on the continental and the national levels is the factor of uneven spatial distribution within particular nations. Thus although there are clusters of libraries of various types around a few urban centres, there are many urban centres where library services are either negligible or non-existent. Similarly there are wide divergencies of adequacy among types of libraries. Thus whereas academic and some large research libraries were relatively well-off before the recent general decline, in a large number of special libraries such a decline in the qualities of their collections and services have a much longer history. As for the public libraries, it is fair to say that

on the whole, they have been experiencing decay rather than development since they were first established.

Thirdly, library development in Africa was neither preceded by, nor has it inspired, a flowering of an African publishing industry. Consequently, it is estimated that as much as 90% of library collections are acquired from foreign publishing sources, largely Western Europe and America. This raises serious questions about the social relevance of such libraries and their ability to contribute to self-sustained development. One other important implication of this import-orientation in the sources of libraries' "raw materials" is their cost to the economy in scarce foreign exchange. U.S.A. export of books to Nigeria for instance, for library and non-library purposes, rose from $1.4m. in 1977 to $22.1m in 1981 dropping to $11.4m in 1983 due to remittance problems.[13] The value of similar export from the U.K. are not available but it formed 13.7% of total U.K. book exports. This represents a substantial value when it is realised that similar figures for the same year for the EEC, USA Australia, South Africa and Canada are 16.9%, 20.6%, 15%, 3% and 6.1% respectively.[14] In the current economic climate, the effect of this dependency is the inability of most libraries to keep up their normal acquisition programmes as a result of the combined effects of a drop in their subventions, a shortage in foreign exchange availability and currency devaluation as a result of the now widely adopted economic policy of structural adjustment programme. In concrete terms, as Williams has shown in the case of Zambia, a devaluation of the Kwacha by over 300% at the time of the weekly auction of foreign exchange resulted in paper-back books becoming a luxury while the prices of the few imported books available in bookshops "reached near-farcial level when viewed in the context of average Zambian salaries".[15] This finding is consistent with similar Nigerian experience which has resulted in about 400% increase in the cost

of imported books.[16] The net effect has been the virtual paralysis of collection development activities in most libraries which may result in the gradual atrophy and death of a number of libraries unless a solution is found.[17]

Finally, since African libraries have been so closely linked, for good or ill, to the developments and products in Europe and America another potential source of crisis is the technological revolution to which attention has been drawn earlier and which will result in the widening of the existing technological gap, unless necessary measures are taken. The sign now is that there is little evidence of computer literacy in Africa and worse still, there is little appreciation of the need for it. Yet these developments are bound to have crucial repercussions in the provision of library and information services in Africa for whether we accept the need to maintain the present pattern of relationship with the developed world or not, the need to adopt the new technology will become an imperative sooner or later in order to ensure access capability to the new formats in which the information of the future will be packaged. Those unable or unwilling to make such adjustments face the prospects of becoming obsolescent.

THE FUTURE

Our analysis has attempted to identify two sources of the present crisis in African library and information services: those resulting from their relations with the domestic environment, the underdeveloped state of libraries generally, and those resulting from their dependence on the external environment which is typified by a growing technological gap and a relationship of dependence which is becoming more and more unmanageable. Linking these two factors is the continent's severe economic recession. It is doubtful whether the economic situation will improve significantly in the short run. The way forward for library and

information services in Africa is therefore to reassess present policies to achieve greater cost effectiveness and relevance of the services while at the same time necessary steps are initiated to prepare for the advent of the technological revolution.

Since virtually all libraries in most African countries are being maintained at public expence, their resoruces should be regarded as national assets regardless of the institutional arrangements under which they function. The present piecemeal and laissez-faire approach to their development should give way to more purposeful and carefully planned and managed national information systems at all levels.

This assumes the need for the adoption of the philosophy of resource sharing where the aggregate physical, intellectual and conceptual resources of a nation's library and information resources are harnessed to serve its total national library and information needs.[18] Under this scheme waste will be eliminated or reduced particularly in the acquisition of expensive and rarely used research materials and in the use of resources and services. Linked to the scheme is an automated shared cataloguing service which will reduce the unit cost of cataloguing services among participating libraries and assist them to cope with the adoption of the new computer-based information technology. Furthermore, in spite of current intra-African communication problems similar collaboration at the regional and continental levels are desirable. In this regard the PADIS experiment is being watched with keen interest.[19]

A more fundamental requirement is the need to review the existing philosophy and practices in the public library sector in favour of more relevant ones which would be adapted to the needs, interests and prevailing conditions of the area served. Such needs are now being more clearly defined in new national policies of rural development as well as current empirical studies based on rural settings.[20] Many writers are now

suggesting community-oriented information services using a variety of information packages and resources ranging from the graphic to the audio-visual, in place of the conventional public libraries.[21,22,23]

For the above reforms to take place, necessary changes must be effected in the curricula of the training institutions allowing for specialized training in the widely differing requirements for the community-oriented multi-media information services and the computer-based national library system for academic and special libraries. The proposal for an African Regional Centre for Information Science at (ARCIS) at the University of Ibadan is a welcome development in this regard.[24]

Finally, other measures outside the domain of library and information services require to be taken, notably in the area of publishing. Such measures would range from the establishment of national institutions to coordinate the development of the book industry, the encouragement of local authorship and the adequate supply, at reasonable cost, of printing materials and equipments. It is necessary to tackle these problems side by side with those of library and information services in view of their symbiotic relationship. A healthy development in this sector will reduce dependence on external sources and ensure a more desirable two-way flow of information.

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REPORT OF THE ACTIVITIES OF THE REGIONAL SECTION FOR ASIA AND OCEANIA 1986 - 1987

IFLA Tokyo

A total of 152 participants from 17 countries in Asia and Oceania attended IFLA Tokyo, not to mention the very large number of 1,292 participants from the host country, Japan. This Second IFLA Conference in Asia, after the one held in the Philippines in 1980, attracted a total of 1,934 participants which included 642 overseas participants from about 54 countries.

Two open meetings were held for the Regional Section in Tokyo which included a half day Seminar on Prospects for Asian Library Development. The meetings were very well attended. We were privileged to have Dr Herman Liebaers, one of the most distinguished past Presidents of IFLA to chair the half-day seminar.

The Kanazawa Pre-Session Seminar

The Seminar with its theme "Industrial and Scientific Information for Development - The Role of Special Libraries for National Development" was held at the Kanazawa Institute of Technology Library Centre from 18-23 August 1986. A total of 14 candidates including twelve from Asia and one each from Latin America and Africa were invited as fully paid participants. Six other participants from developing countries attended the Seminar at their own expense including three from Morocco, one from Turkey, one from Yugoslavia and one from Malaysia. Fifty Japanese and three from the U.S. also attended the Seminar.

This is the first IFLA Pre-session Seminar on Special Libraries and the Kanazawa Institute of Technology with its ultra modern facilities provided an ideal setting for the Seminar. With the warm Japanese hospitality the participants could not have wished for a more rewarding and interesting Pre-session Seminar. A total of fifteen recommendations were adopted by the Seminar.

Nominations to the Regional Standing Advisory Committee for Asia and Oceania

In keeping with the IFLA Executive Board's decision to establish a more effective and representative Regional Advisory Committee (RAC) for the Section for Asia and Oceania, invitations for nominations to the RAC were sent out to all the IFLA national and institutional members in the Asia and Oceania region.

Meeting 178

The fifty or so countries in the Asia and Oceania region were broadly divided into five sub-regions as follows:

1) Central and East Asia (8 countries)

2) South East Asia (10 count5ries)

3) South Asia (8 countries)

4) West Asia (14 countries)

5) Oceania (8 countries or more)

The three developed countries in the region, i.e. Japan, Australia and New Zeland were also included. The RAC is to be constituted with a maximum of 20 members made up of four from each sub-region.

The final analysis of the nominations received from the sub-regions were as follows:

South East Asia: Three nominations: one from Thailand and two from Malaysia.

South Asia: Six nominations received: four from India, one from Nepal and one from Bangladesh.

West Asia: Three nominations received: one each from Kuwait, Iran and Jordan.

Oceania: Four nominations received: all from Australia.

East Asia: One nomination received from Japan.

A total of seventeen nominations were received from ten countries in the region with India and Australia having four nominations each. There was no response from seventeen other countries in the region who have IFLA members.

According to the IFLA rules of procedure 8.8, there should not be more than two members elected to represent each sub-region, making a total of 10 members on the Regional Advisory Committee. However, the IFLA Secretary General has ruled that the existing seventeen nominations be accepted provisionally for a period of two years, before the RAC is constituted according to the rules of procedure.

IFLA Brighton

Pre-Session: The IFLA Pre-session Seminar entitled "Colloquim on the Education and Training of Library, Information and Archival Personnel" will be jointly organised by IFLA, FID and ICA in London just prior to the IFLA General Conference. The selection of participants have been based to a large extent on biodata received from scores of applicants from the developing countries. To the best of my knowledge about seven participants have been invited from Asia and Oceania including one each from the Philippines, Jordan, Thailand, Pakistan, India, Malaysia and Fiji.

IFLA Conference: At the IFLA Conference the Regional Section for Asia and Oceania has scheduled two open meetings one after the other between 15.00 and 18.30 on Wednesday, 19 August. A total of three papers, two from China and one from Malaysia will be presented followed by a business session. Two other speakers from Asia, one probably from India and the other from the Philippines will also be presenting papers at the two open meetings of the Division of Regional Activities scheduled for Tuesday, 18 August between 15.00 and 18.30.

Change of Venue of the IFLA Regional Secretariat for Asia and Oceania with the Retirement of the Chairman

At Tokyo, the imminent change of the venue of the Regional Secretariat for Asia and Oceania was announced in view of the retirement of the Chairman from the Rubber Research Institute of Malaysia by late september 1987. Notwithstanding the fact that more than three years notice was given to IFLA, there has been some delay in identifying an appropriate venue for the regional secretariat. In the circumstances, special arrangements have been made to use the present address of the secretariat till the end of the year, by which time the IFLA Executive Board will hopefully find an appropriate venue. I will still be holding the fort as far as the secretariat is concerned till the end of the year.

This is probably the last time I am submitting this report on the activities of the Regional Section before I relinquish my responsibilities at the end of my term towards the end of this year. I wish to take this opportunity to place on record the cooperation extended by the Director and Board of the Rubber Research Institute of Malaysia in allowing me the time to participate in IFLA activities for these seventeen years, as well as for providing the facilities to host the Regional Secretariat in the Institute. I wish to also thank all the many colleagues in the International Library World represented in IFLA for their cooperation and assistance in so many ways to make my many years' service to IFLA a memorable and happy task.

J.S. Soosai
Chairman

10.8.87